

**ATTORNEY CLIENT PRIVELEGE
(CONSULTING EXPERT ONLY)**

SITE RECONNAISSANCE REPORT

**Peeler Ranch
Atascosa County, Texas**

Prepared for:

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January 2018

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Laboratory Analytical Report



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**ATTORNEY CLIENT PRIVILEGE
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Re: Initial Site Reconnaissance, Peeler Ranch located in Atascosa County, Texas

On November 13, 2017, Geo Strata geoscientists Suzanne Green and Cheri Krieg, and ecologist, Dr. Lynn Kitchen with Adams Ecology, Inc. (Adams), met at the Peeler Ranch with Trey Scott and Sean Caporaletti of Trinity Mineral Management (Trinity), and the ranch owner, Mr. Alonzo Peeler and his son, Jason Peeler (the Peelers).

Prior to visiting the ranch, a pre-field meeting was held at the Trinity offices on November 7th, 2017. During the meeting, two major sources of environmental concern were raised by the Peelers in relation to their ranch, as follows:

- Firstly, the lignite power plant currently owned by the San Miguel Electric Cooperative, Inc. (SMECI), located on approximately 300-acres in the center of the ranch; and,
- The lignite strip-mining operations which occurred on the ranch in the most recent past (ceasing approximately 15 years ago).

Trinity indicated there is a buffer zone that is currently leased by SMECI from the Peelers occupying approximately 902-acres, and that the former lignite mines are located within a larger lease with the Peelers, occupying approximately 10,000-acres.

The purpose of the site visit was to perform an initial site reconnaissance to conduct the following scope of services (as outlined in our proposal dated November 10, 2017):

- A drive-through of the ranch to view specific areas of the property that represent a concern;
- Interviews with the Peelers regarding the history of the ranch's use for agriculture, lignite mining, and power plant operations;
- Potential collection of media samples from suspect areas for laboratory analysis of cyanide, cations and anions.

- Laboratory analysis to be performed by DHL Analytical, located in Round Rock, Texas on a standard 7-10 day turnaround time.
- Collection of photographic documentation to document current site conditions, including any particular environmental concerns identified during the visit.
- Presentation of the results of the site visit and the data analyses to the client in a brief (2-3 page) letter report, along with the laboratory results, photographs, and maps, and including conclusions and recommendations for the next appropriate steps.
- The letter report to be prepared as a collaborative effort between both Geo Strata and Adams, based on our collective roles in the project assessment.

On the day of the site visit, after conducting a brief interview with the Peelers, the inspection team were driven around the ranch by Jason Peeler to visit select locations identified by the Peelers as being a potential environmental concern.

A summary of each observation point visited, along with a description of each location, is provided by Adams in their written report provided in **Appendix A**. The Adams report includes a site map, and photographic documentation collected at each location. The primary focus of the Adams report was to provide an overall impression of the ecological and biological issues that were observed on the ranch by Dr. Kitchen during the site visit.

The followings sections describe the sampling and analysis that was performed by the Geo Strata team:

Discussion of Media Sampling and Analysis

Geo Strata personnel were responsible for collection of solid and surface water samples for laboratory analysis. It should be noted that collection of these samples is considered preliminary, and does not constitute a thorough investigation of the site. No samples were collected of groundwater on the site, either from the uppermost groundwater, or from any of the water wells located on the ranch. Additionally, no samples were collected from any surface water bodies located off-site.

A total of two solid samples (AEI 002, and AEI 010), and six surface water samples (AEI 011, 003, 004, 005, 006, 007), plus one surface water sample duplicate (Dup-1, of AEI 007) were collected for laboratory analysis. No solid sample duplicates were collected since they comprised one sample each of two media types (soil and waste). A site map to show the sample locations is presented as **Figure 1**.

Solid Samples: The two solid samples collected were as follows:

- A composite sample of soil/sediment from the north side of an unvegetated area north of one of the San Miguel Power Plant retention ponds, on the Peeler property within the Plant buffer zone (AEI 002);
- A sample of ash waste (AEI 010) from a location east of the Plant, on the southern property boundary. At this second location, ash waste was observed primarily to be stored on an off-site tract, but had also been placed on a portion of the property owned by the Peelers.

The two solid samples were each analyzed for the following:

Trace Metals ICP-MS by SW6020A

Anions by SW9056A

Mercury by SW7471B

Cyanide by SW9014

Analytical results for the soil/sediment sample were tabulated and compared to Texas Risk Reduction Program (TRRP) Tier 1 residential Protective Concentration Levels (PCLs) for a 30-acre property [using the most recent March 31, 2017 tables], and/or Texas Specific Background Levels [Texas Background] (if higher, for metals only). The TRRP PCLs were selected for use in comparison of the results for screening purposes only.

Since the ash is a waste (and its exact origin is unknown i.e. whether it is a bottom ash or fly ash), the analytical results may not be directly compared to the regulatory levels listed. However, the analytical data will serve as an indication of the chemical constituents present in the ash, for comparison with other pertinent data collected from the site, to assist in determining potential connections with specific environmental impacts. It should be noted that the extremely large waste ash stockpile has not been buried or covered, and can easily mix with the surface soils.

The tabulated results are presented in **Appendix B** as Table 1.

Review of the analytical results showed the following:

- Arsenic measured 7.38 mg/kg in the soil/sediment sample and 10.9 mg/kg in the ash waste. The applicable Tier 1 PCL for arsenic is 2.5 mg/kg, and Texas Background is 5.9 mg/kg. The arsenic levels are not significantly higher than Texas Background in the soil/sediment sample; more extensive sampling and background studies are recommended to evaluate the significance of the results.
- Calcium measured 5,890 mg/kg in the soil/sediment sample, and 76,300 mg/kg in the ash waste.
- Iron measured 10,600 mg/kg in the soil/sediment sample, and 5,770 mg/kg in the ash waste.
- Magnesium measured 3,990 mg/kg in the soil/sediment sample, and 692 mg/kg in the ash waste.
- Potassium measured 2,290 mg/kg in the soil/sediment sample, and 726 mg/kg in the ash waste.
- Selenium measured 2.49 mg/kg in soil/sediment sample, and 7.85 mg/kg in the ash waste. The applicable Tier 1 PCL for selenium is 1.1 mg/kg. Further sampling and background studies are recommended to evaluate the significance of the results. However, it is noted that selenium is a common contaminant found in fly ash. Since the ash waste located on the Peeler Ranch is stored in a large uncovered stockpile, the waste is subject to dust, rainwater infiltration, leachate effects and stormwater runoff.
- Sodium levels measured 20,200 mg/kg in the soil/sediment sample, along with chlorides of 19,300 mg/kg. Although Tier 1 PCLs are not applicable for these analytes, the Texas Railroad Commission (RRC) Oil & Gas Division uses a background level of 3,000 mg/kg for chlorides in soils where no background studies are available. The elevated sodium and chloride concentrations are

suggestive of a saline environment.

- Mercury was present in the fly ash sample measuring 0.235 mg/kg.

Surface Water Samples: The six surface water samples (AEI 011, 003, 004, 005, 006, 007), plus one sample duplicate (Dup-1 of AEI 007) were collected from six individual locations east northeast of the power plant, in the eastern portion of the ranch. The samples were collected in order, first from a location close to the power plant, moving progressively further east. Note: no samples were collected either upstream or downstream of the surface water on-site. The surface water samples were collected as follows:

- Standing water in an unvegetated area approximately 20 feet north of a small creek which originated from the power plant (Sample AEI 011);
- A former deep mine pit that has been filled with water (AEI 003);
- A marshy area with minimal vegetation that appeared to be a seep or spring (AEI 004);
- A spring where it crossed a low water crossing (AEI 005);
- A shallow ditch close to a large pond that had been created in a former mine pit. The soil/sediment showed strong evidence of iron-forming bacteria, and appeared to originate from a seep or spring (AEI 006);
- A large pond created in a former mine pit, adjacent to a culvert (AEI 007). The duplicate sample (DUP-1) was also collected from this location.

The seven surface water samples (including the duplicate) were each analyzed for the following:

Trace Metals ICP-MS by SW6020A
Uranium ICPMS by SW6020A
Anions by IC Method E300
Mercury by SW7470A
Cyanide by M4500-CN E
pH by M4500-H+ B

Analytical results were tabulated and compared to the most conservative of the following to derive an assessment level:

- Texas Commission on Environmental Quality (TCEQ) recommended concentration limits for substances in drinking water for livestock (TCEQ RG-263, Revised January 2017)
- TRRP Surface Water Benchmarks for Metals, Inorganics (August 2016)
- Human Health Surface Water Risk-Based Exposure Limits (SWRBELs)

The tabulated results are presented in **Appendix B** as Table 2.

Review of the analytical results revealed the following:

- Aluminum concentrations exceeded the surface water benchmark of 0.087 mg/L in all of the samples analyzed, ranging from the lowest concentration of 0.195 mg/L in Dup-1 (AEI 007) to a maximum of 4.90 mg/L in AEI 004.
- Arsenic concentrations exceeded the Human Health RBEL of 0.01 mg/L in all of the samples that were analyzed except AEI 005. The maximum concentration

collected from the apparent seep/spring at location AEI 006, measured 0.0742 mg/L.

- Cadmium concentrations slightly exceeded the surface water benchmark of 0.00015 mg/L in two samples only; AEI 003 and AEI 004.
- Calcium concentrations ranged between 543 mg/L (AEI 011) and a maximum of 1,700 mg/L in the marshy area which appeared to be a seep or spring at location AEI 004. Calcium concentrations were significantly higher in this sample than all of the other locations. Notably, calcium concentrations were also very elevated in the ash waste (AEI 010). The livestock recommended concentration for drinking water is 1,000 mg/l; therefore, the concentrations in AEI 004 exceeded this recommended value.
- Iron concentrations ranged between 0.159 mg/L and a maximum of 8.47 mg/L in the apparent seep/spring at location AEI 006, most likely reflective of the heavy brownish-red iron staining in the soil/sediment. The surface water benchmark for iron of 1 mg/L was exceeded in AEI 011 (1.08 mg/L), AEI 004 (2.46 mg/L) and AEI 006 (8.47 mg/L).
- Lead concentrations slightly exceeded the Human Health RBEL of 0.00115 mg/L in AEI 011, and AEI 004.
- Magnesium concentrations exceeded the surface water benchmark of 3.235 mg/L in all of the samples, ranging between 38.3 mg/L (AEI 011) to a maximum of 123 mg/L in AEI 004.
- Manganese concentrations exceeded the Human Health RBEL of 0.05 mg/L in all of the samples. The maximum concentrations of 6.79 mg/L were observed in the sample collected from the apparent seep/spring at location AEI 006.
- Sodium concentrations ranged between 1,510 mg/L (AEI 011) to a maximum of 5,080 mg/L in the marshy area which appeared to be a seep or spring at location AEI 004. Notably, sodium concentrations were elevated above 3,000 mg/L in all of the locations, except AEI 011.
- Potassium concentrations ranged between 23.7 (AEI 011) to a maximum of 87.6 in the location of the former mine pit (AEI 007 duplicate). Potassium measured a minimum of 80 mg/L in all of the samples except AEI 011.
- Thallium concentrations slightly exceeded the Human Health RBEL of 0.00012 mg/L in AEI 005 and AEI 006.
- Uranium concentrations slightly exceeded the Tier 1 PCL of 0.03 mg/L in three of the samples; AEI 011, AEI 004 and AEI 005. Maximum concentrations measured 0.0549 mg/L in the marshy area which appeared to be a seep or spring at location AEI 004.
- Chloride concentrations exceeded the surface water benchmark of 230 mg/L in all of the aqueous samples. Maximum chloride concentrations measured 9,590 mg/L in the marshy area which appeared to be a seep or spring at location AEI 004.
- Sulfate concentrations exceeded the recommended livestock concentration for drinking of 500 mg/L in all of the samples, with the maximum concentration of 3,270 mg/L in AEI 003.
- Mercury and cyanide concentrations measured non-detect in all of the samples analyzed.
- pH ranged between 6.48 and 8.37; the most basic pH was recorded in sample AEI 011, close to the power plant. The most acidic sample (6.48) was recorded in the sample collected from the apparent seep/spring at location AEI 006.

In addition to collection of the media samples, Geo Strata noted the presence of several monitor wells in the vicinity of the observation points. Specifically, one monitor well was observed inside the power plant fenceline close to the location of AEI 011; a second monitor well [MW-1 (S)] close to AEI 005, and a third well on the return trip to the ranch house, northwest of AEI 006. No samples were collected from any of the monitor wells during this site visit.

During a conversation with Jason Peeler, he noted that in the past (exact date unknown), a large fish kill occurred in the large pond at the location of AEI 007.

Conclusions and Recommendations

Conclusions offered by Adams are presented in the final two pages of their report presented in Appendix A. Primarily, the concerns raised by Adams are the presence of saline conditions at many of the observation points visited, in addition to stagnation and/or anaerobic conditions in the water.

Additionally, Adams references the ash waste pile, which does not appear to have been handled properly; although there was evidence of dust control measures that were being implemented.

Adams also noted that the reclamation areas where the lignite mines were located did not appear to have re-established vegetation typical of South Texas, suggestive that the restoration may not have involved proper stockpiling and replacement of the top soils.

Finally, Adams noted that the existing stream channels and wetlands appear to have been altered by the mining activities, and not properly restored.

Review of the soil/sediment and surface water analytical data is suggestive of saline conditions at each of the locations with the exception of the standing water sample taken close to the plant, which may be representative of pooled rainwater, since it was not collected from a conveyance.

Elevated arsenic and selenium concentrations, exceeding TRRP Tier 1 PCLs (30-acre residential property) were observed in the soil/sediment sample.

Surface water samples showed elevated concentrations above the respective assessment level for the following: aluminum, arsenic, cadmium, calcium, iron, lead, magnesium, manganese, thallium, chloride and sulfate. The most notable exceedances were aluminum, magnesium, manganese, chloride and sulfate, particularly in samples AEI 004, and AEI 006. Both samples were collected from apparent seeps or springs adjacent to the roadway.

Recommendations

It is Geo Strata's opinion that it would be preferable not to draw any concrete conclusions regarding the surface water analytical results obtained during the site reconnaissance visit, until the RRC files have been requested and reviewed. The RRC Surface Mining and Reclamation Division (SMRD) regulations require a determination of water quality for common inorganic constituents and certain trace metals as part of the permit holders plan, both for pre-mining, and post-mining conditions, as well as during active mining (on a quarterly basis).

If historical data is available (such as in the baseline studies that are required as part of the pre-mining permit), the historical data may be compared to the current data to determine if any changes have been observed over time. Additionally, quarterly monitoring reports and sampling performed during the reclamation process should be reviewed, if available. Review of this periodic data will also be helpful in preparing a comparison with the present day conditions.

Similarly, it would be helpful to research typical water quality characteristics in the area. Notably, recent conversations with a Project Manager in the RRC Surface Mining and Reclamation Division (SMRD) in Austin indicated that reports of surface water and shallow alluvium being impacted by saline groundwater flowing from artesian oil wells has been documented in the area of the San Miguel mines.

It is further recommended that the pre-mining reclamation plan is reviewed, along with any watershed studies, and other pertinent data, including any history of violations associated with the mine. Additionally, with regard to collection and analysis of any groundwater samples, both from the upper groundwater zone and from the sub-burden aquifer, it is recommended that pre-mining and post-mining quarterly monitoring results are obtained from the RRC, and reviewed before proceeding with any future planned sampling and analysis. Review of the pre-mining reports should be reflective of the baseline conditions before the ground was disturbed, and will allow comparison of current data with baseline conditions. It will also allow for development of a list of parameters recommended for laboratory analysis.

In summary, Geo Strata and Adams recommend that the next appropriate step is to mobilize personnel to the RRC File room, both to review and make copies of relevant portions of the file for the San Miguel mine, and to meet and talk with the Project Manager, Tim Walter.

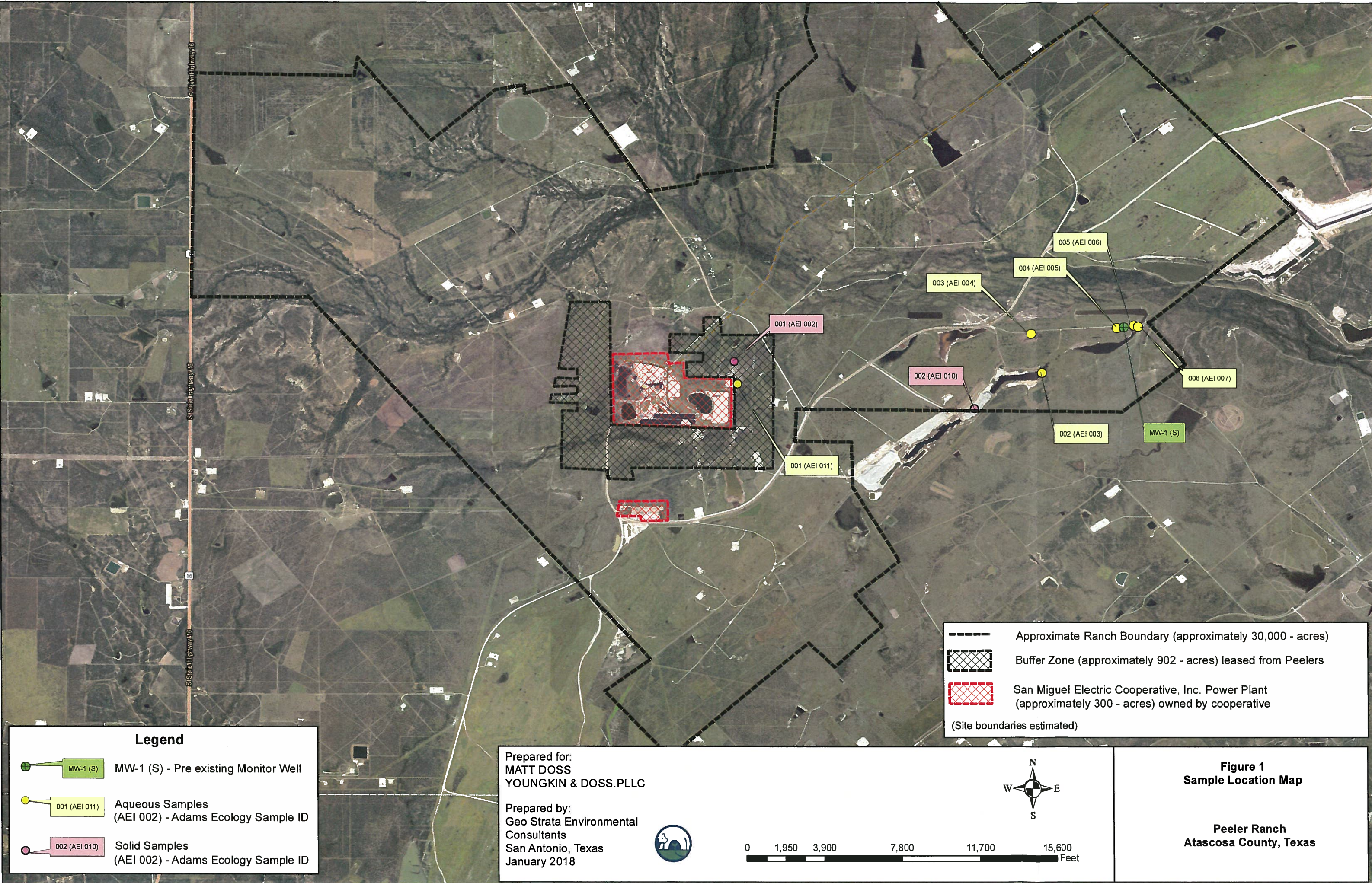
Geo Strata appreciates the opportunity to assist Youngkin & Doss with this project.

Regards,



Suzanne Green, P.G.

Geo Strata Environmental Consultants



**Peeler Ranch
Atascosa County, Texas**

APPENDIX A

**Impressions of Ecological and Biological Issues on the San Miguel Mining
Areas on the Peeler Ranch (Adams)**

Impressions of Ecological and Biological Issues on the San Miguel Mining Areas on the Peeler Ranch

Introduction

Dr. Lynn M. Kitchen, Senior Ecologist with Adams Ecology, Inc. (AEI) travelled to the Peeler Ranch in Atascosa County, Texas to attend a site visit of the San Miguel Coal Mine on November 13, 2017. This report documents the overall impression of ecological and biological issues that were observed on the Peeler Ranch during the site visit. Other members of the site visit team included Cheri Krieg and Suzanne Green with Geo Strata, Trey Scott with Trinity Mineral Management, and Alonzo Peeler, ranch owner, and his son, Jason Peeler.

Methodology

The site visit team met at the Peeler Ranch headquarters where Alonzo and Jason Peeler provided an overview of the history of the ranch and their general impressions of issues that have arisen on the ranch due to activities by the San Miguel strip mine operation and the San Miguel Power Plant. Overall, it appeared that the most significant issues on the ranch appeared to be surface water contamination, potential groundwater contamination, methods used for coal ash disposal, and significant areas where unknown factors appear to be causing mortality and loss of vegetation.

During the site visit, the team stopped at several locations and obtained water and or soil samples to be analyzed for various constituents at an approved analytical lab. AEI and Geo Strata collected samples for analysis in the field. Some preliminary water quality data was collected in the field using a handheld device which measured pH, salinity, and total dissolved solids. Results of field sampling and laboratory analysis is discussed by Geo Strata in a separate part of this report. AEI took photos and observations of the sampling points and other portions of the ranch to document overall ecological characteristics of potentially impacted areas.

Results

In the paragraphs that follow, the overall ecological characteristics of each sampling point or photo point will be discussed. A map and associated photos will be provided for each point with a short discussion of any observations made at that point. An overall impression of ecological issues will be provided in the conclusion section of this report. Figure 1 shows the location of each point that will be discussed in this report.

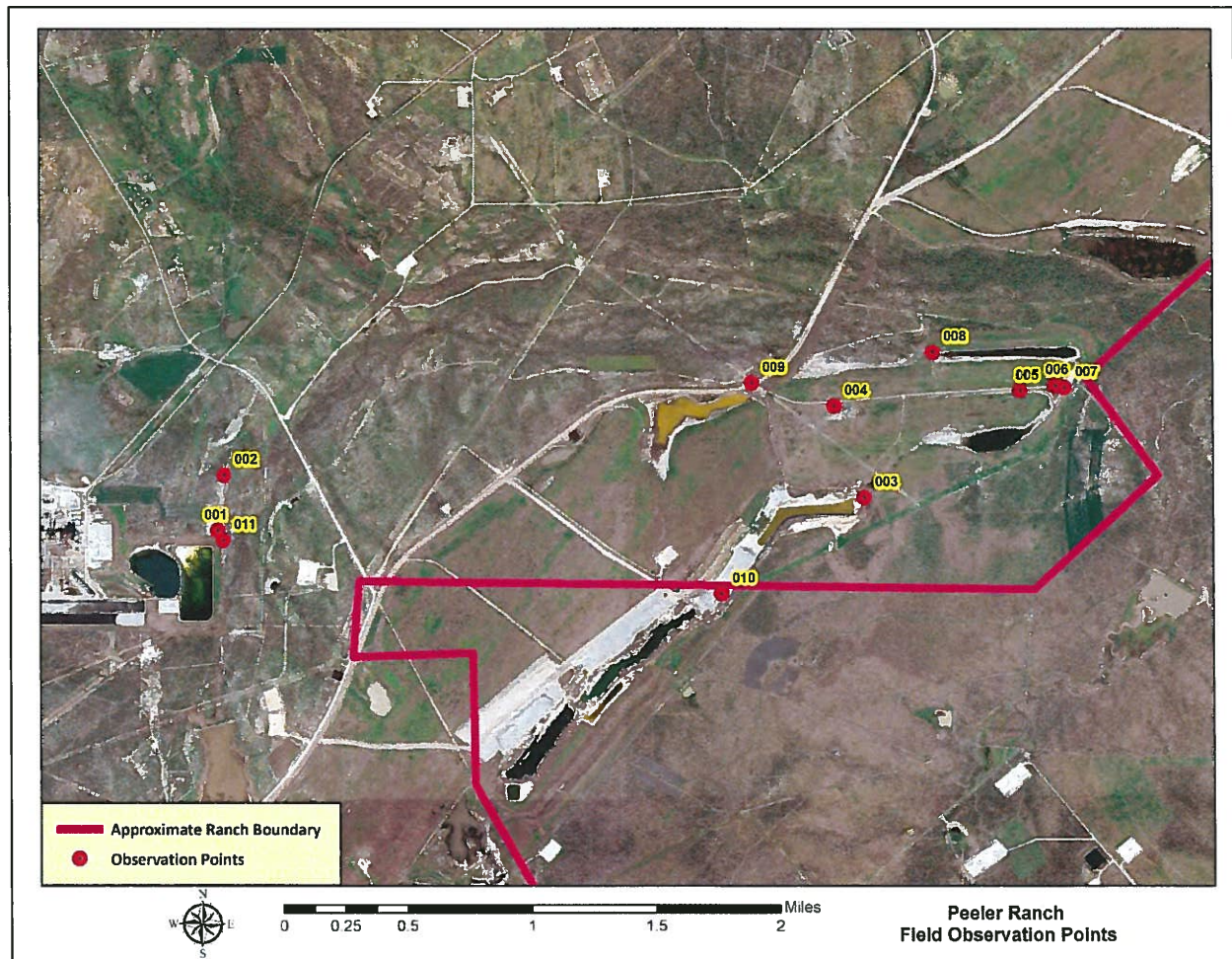


Figure 1. 2015 satellite imagery showing the location of all observation points for the site visit to the Peeler Ranch

OBSERVATION POINTS 001, 002, AND 011

These three observation points were located in an unvegetated area located just north of one of the retention ponds found on the San Miguel Power Plant (Figure 2). The central portion of this drainage area was completely unvegetated and covered with a 1-4 inch layer of finely dispersed clay. This layer was overlying a sandy soil. Vegetation on the periphery of the area was dominated by alkali sacaton (*Sporobolus airoides*), a grass highly tolerant to saline soils and inundation. The finely dispersed clays lying on the soil surface were



View to the north from Observation Point 001

apparently impeding infiltration of water into the soil. Salinity causes clay soils to be dispersed, and result in poor infiltration. Also noted in the area were dead woody plants and shrubs, some of which were killed by herbicide applications according to Jason Peeler. A soil sample was taken at Point 002 and a water sample was taken at Point 011. Laboratory analysis indicated that the sodium and chloride content of the soil was elevated and may be the cause for the lack of vegetation. The actual source of salinity could not be determined because the unvegetated area ended abruptly at the fence located on the periphery of the power plant. Field observations indicated that imported soils may have been placed on top of the saline soils in the process of constructing the berm around the detention basins at the power plant. The location where water was sampled (Point 011) supported a fairly healthy population of cattail. Water was flowing in a small creek emanating from the power plant close to this sampling point. The water sample was collected from a pool of standing water approximately 20 feet north of the creek in a low-lying area. Laboratory analysis indicated relatively low levels of sodium and chloride.

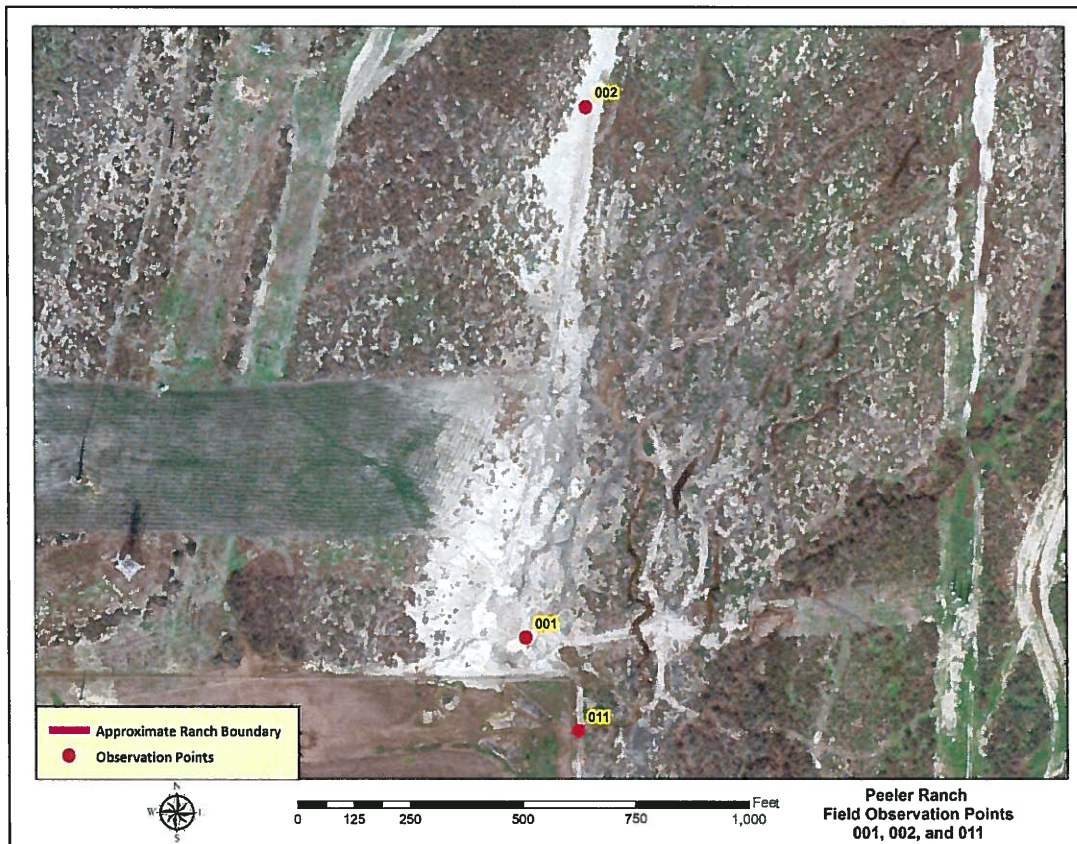


Figure 2. 2015 satellite imagery showing the locations of observation points 001, 002, and 011.

OBSERVATION POINT 003

Observation Point 003 was located at a relatively deep mine pit now filled with water (Figure 3). According to Jason Peeler, it appeared that the mining company was filling this pit with coal ash which was displacing the water out of the pit. Vegetation was not evident along the banks of the pit and no aquatic life was observed. Waterfowl species were observed and appeared to be in good health. Again this may indicate that the water was somewhat saline. Lab analysis of the water sample indicated that it was somewhat saline which would explain the lack of aquatic species and no apparent impact on waterfowl.



View of the pond at Observation Point 003

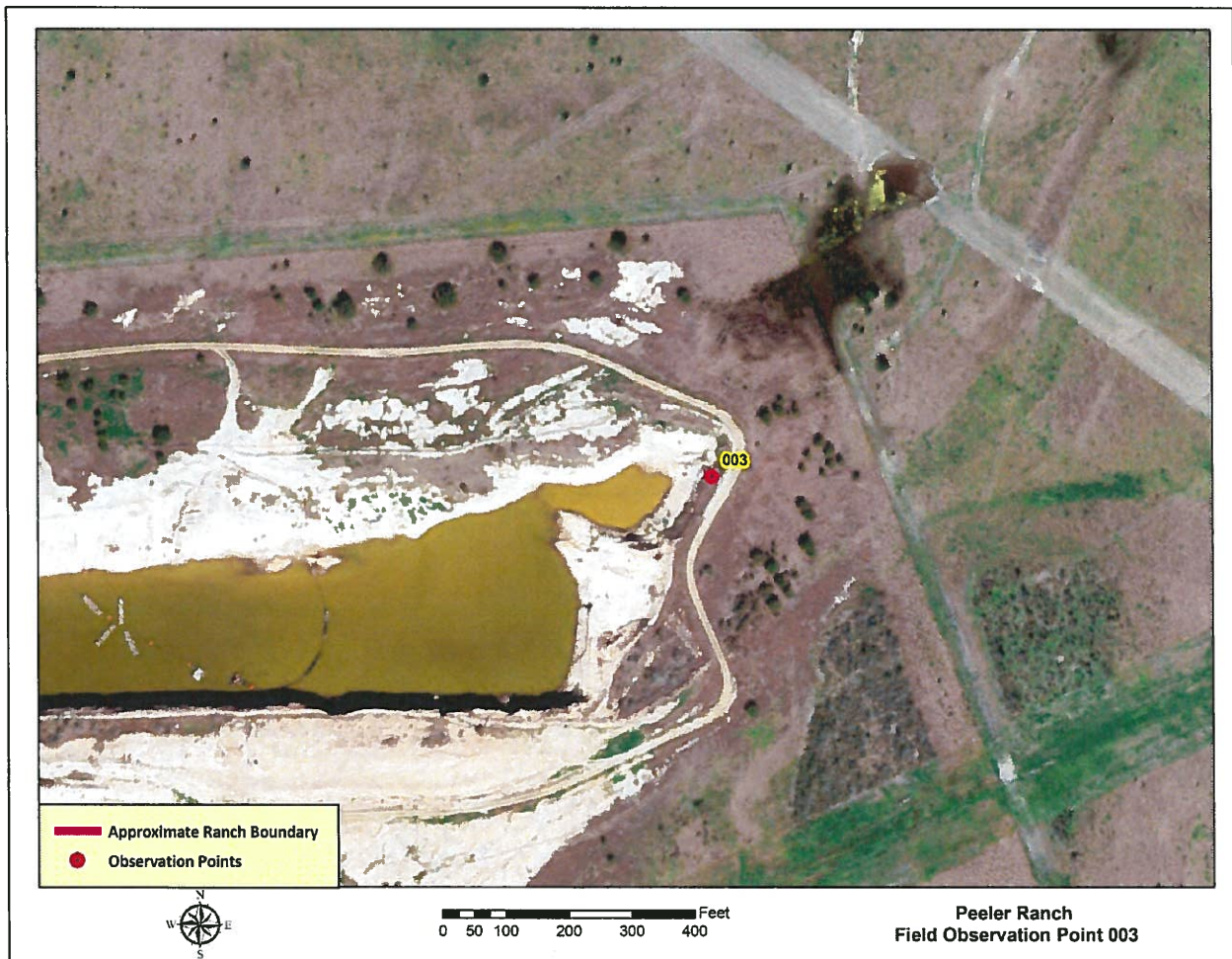


Figure 3. In Observation Point 3

OBSERVATION POINT 004

This observation point was located on a seep or spring found in a low, poorly drained area. Field observations indicated that this area had increased in size since the 2015 Satellite imagery was taken (Figure 4). The area showed excellent wetland characteristics with hydric soils typified by deep black gleying and a plant community dominated by wetland obligate plants such as soft stem bulrush. Some of the areas lack vegetation or supported vegetation showing stress. Other areas appeared to be recovering with fairly healthy stands of bulrush. The origin of the water in this seep is likely ponded mining pits located to the north and south. Water sample analysis showed a high sodium and chloride content in this water, indicative of saline conditions. Although some plant stress was observed and some areas lacked vegetation, the site was showing some signs of recovery especially in newly inundated areas.



View to the west of Observation Point 004.

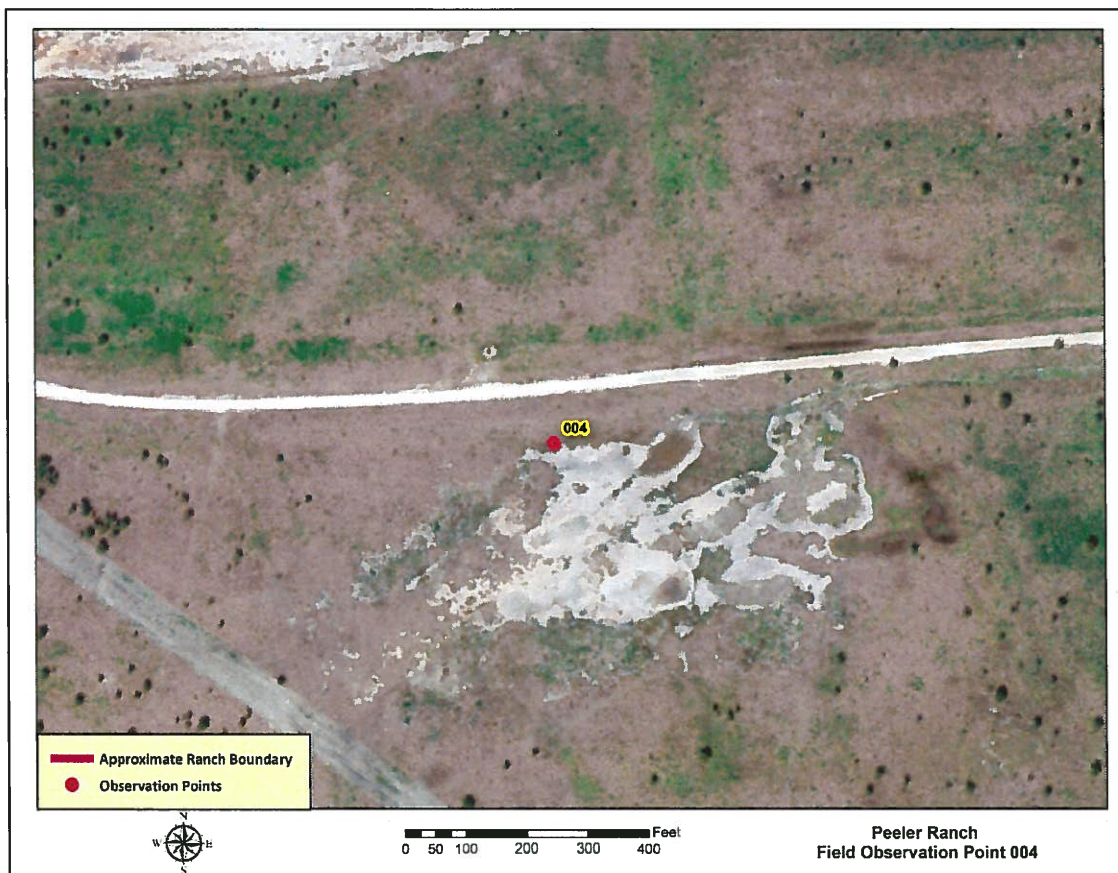


Figure 4. 2015 satellite imagery showing the location of Observation Point 004

OBSERVATION POINT 005

Observation Point 005 was located in a stream that connected the seep area to an inundated mine pit (Figure 5). At the time of the field visit, water was flowing in the stream and a sample was taken at a low water crossing. As observed at this seep, healthy stands of soft-stem bulrush were established throughout this stream. Some areas lacked vegetation, but not a significant portion of the stream basin. Laboratory analysis of water in the stream indicated condition similar to the seep with high sodium and chloride content and a similar sulfate content. The pH of the water was 7.62, which was slightly lower than that at the seeps (8.46). The slight vegetation stress observed at this site could also be attributed to salinity of the water.



Upstream view of Observation Point 005

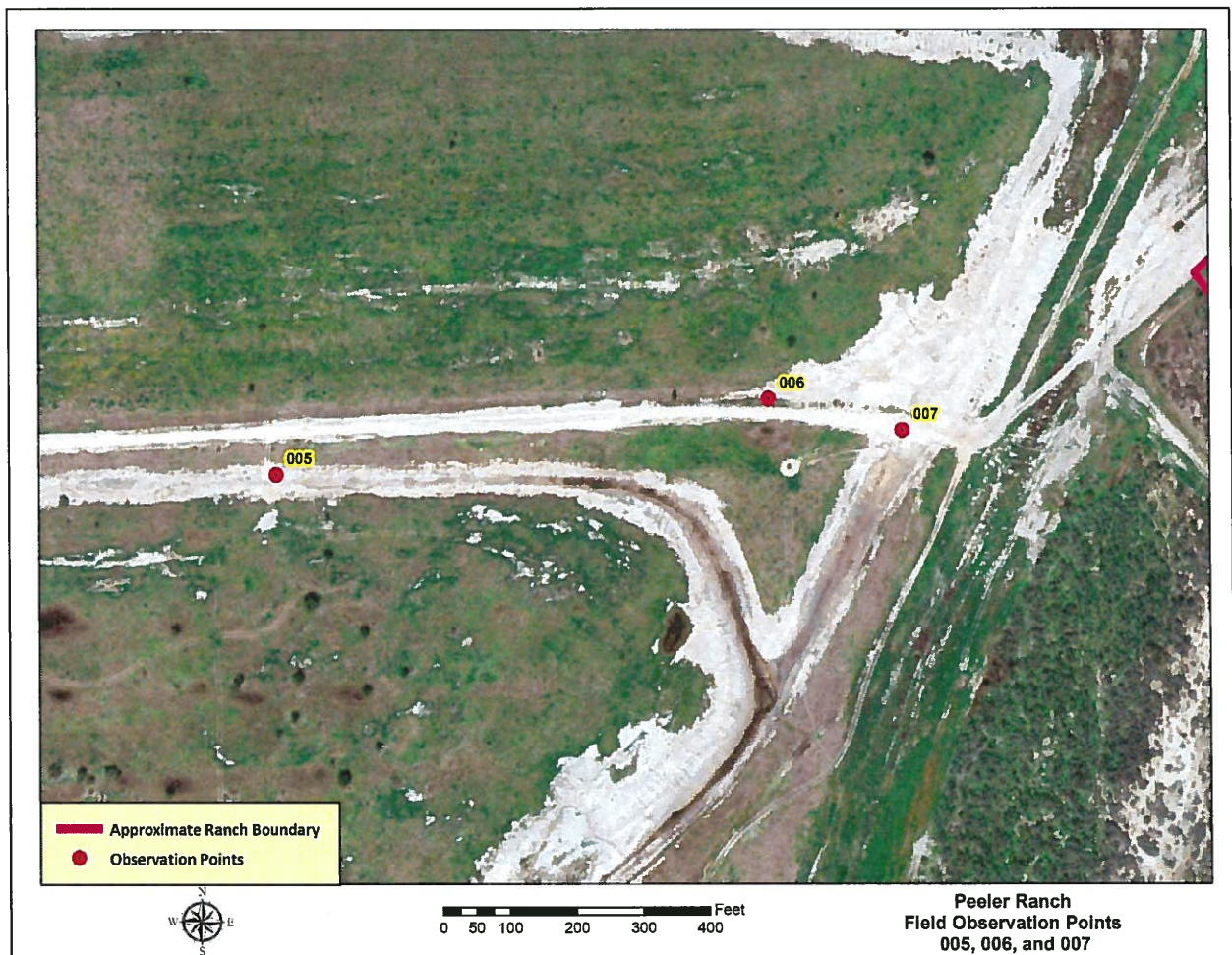


Figure 5. 2015 satellite imagery showing the location of Observation Points 005, 006, and 007

OBSERVATION POINT 006

This observation point was located in a shallow ditch draining into the same group of ponds as the stream at Observation Point 005. Most of the ditch lacked vegetation with the exception of cattails, which are tolerant of saline conditions. Soils showed very strong hydric conditions as indicated by black gleying of the soil and the presence of iron bacteria. These bacteria commonly form orange colonies below iron-rich seepages, especially along stream margins. This bacteria obtains energy by oxidizing iron, usually in an anaerobic or stagnant aqueous environment. Thus, this seep is apparently fed by water that is probably rich in iron. No living creatures were observed in or around this water. Laboratory analysis of the water indicated a much higher iron content compared to other samples taken during the visit, plus relatively high salinity.



Upstream view of Observation Point 006

OBSERVATION POINT 007



Upstream view of the pond to the south of the culvert at Observation Point 007.

Closer view of the iron bacteria and black soil gleying at Observation Point 6

Observation Point 007 was located on a culvert that connected to previously mined areas that were now ponded. No aquatic life was observed in either of the ponds. Both ponds showed characteristics of an anaerobic or stagnant environment typified by colonies of cyanobacteria (blue-green algae) along the

banks. Additionally, sediments located along the banks were definitely hydric or anaerobic and displayed significant black gleying just below the soil surface. Field observations indicated healthy flocks of waterfowl including white pelicans, common egrets, and black-necked stilts. In addition, the banks of the ponds, especially the north pond showed evidence of excessive use by waterfowl (tracks, white wash). Very little vegetation was observed along the banks where water had been in contact with soil. The stagnant water showing low oxygen levels and symptoms of an anaerobic environment could be caused by algal blooms or oxidation of metals in the sediments and water. Laboratory analysis again indicated high levels of sulfates, sodium, and chloride indicative of a saline environment. This would explain the healthy flocks of waterfowl, who would not be affected by saline water or sulfates.



Upstream view of the pond to the north of the culvert at Observation Point 007.



Upstream view of the sampling point at the culvert at Observation Point 007.

OBSERVATION POINT 008

This observation point was located on the west end of the pond observed on the north side of the culvert at Observation Point 007 (Figure 6). Large flocks of waterfowl were also observed on this end of the pond. No immediately observable sign of aquatic wildlife was observed. West of this point was an area that appeared to show some level of stress resulting in open areas lacking vegetation and supporting stands of dead woody plants. The source of the water in this area could be seepage from the pond or overland drainage from other locations to the west. Satellite imagery indicates that this area had previously been mined resulting in destruction of many of the stream channels previously draining the area that is now under stress. Short segments of these stream channels can be observed in the satellite imagery and appeared to contain water. No samples were taken at this site.



Pond located to the east of Observation Point 008.



**Area of stressed vegetation located to the west of Observation
Point 008**

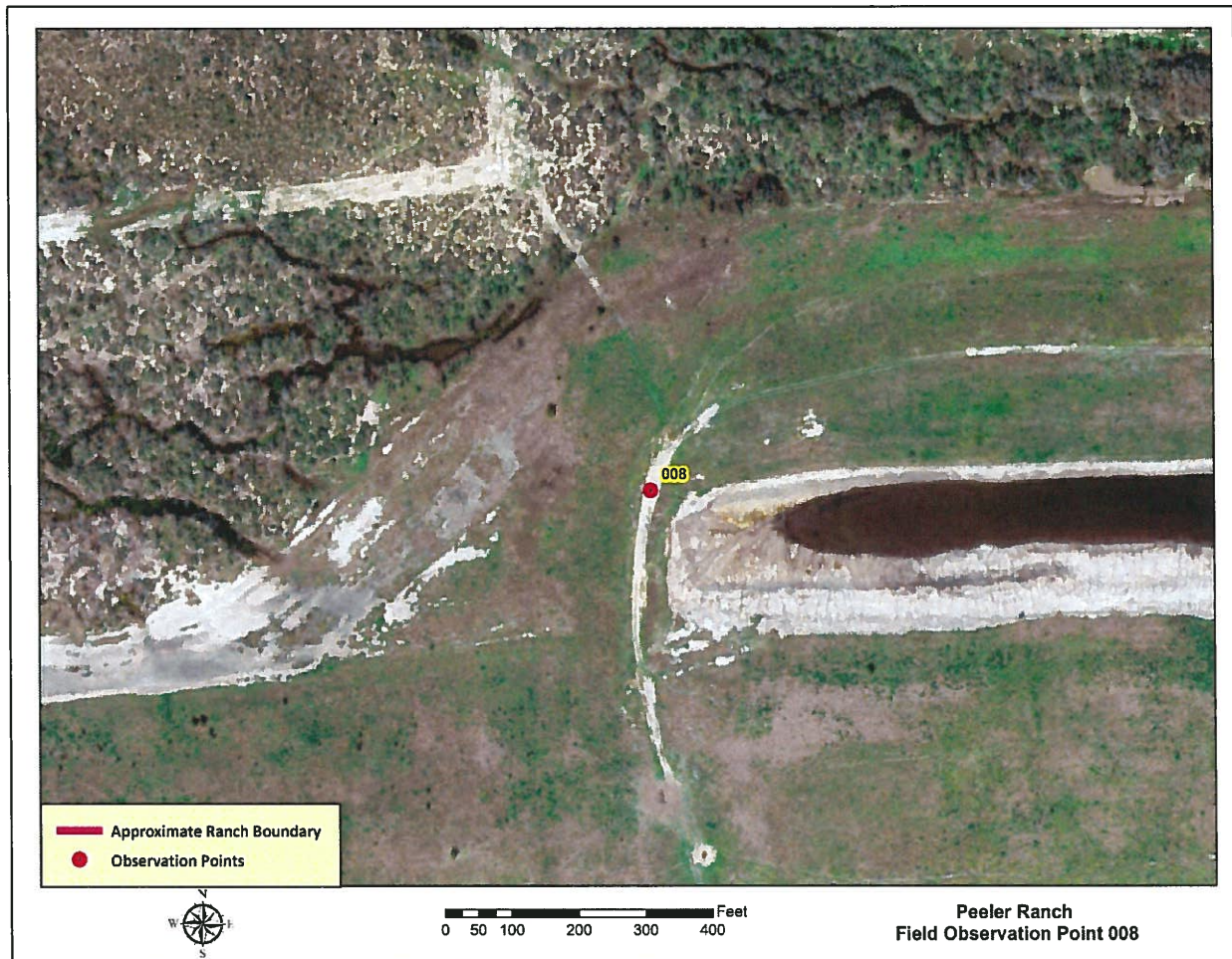


Figure 6. 2015 satellite imagery showing the location of Observation Point 008

OBSERVATION POINT 009

Observation Point 009 was located on the north side of the strip mine haul road (Figure 7). As with many of the other areas, expanses of unvegetated soil was observed. Additionally, an iron fence corner was located on the site. According to Jason Peeler, the fence posts had been replaced several times because they were destroyed by corrosion apparently associated with this soil. The posts are now set above the soil in concrete blocks. Woody vegetation also showed a high level of mortality, partly due to herbicide treatments, but also due to stress associated with the soil



environment. Corrosion of the iron fence posts would indicate an acid soil with high sulfate content, but no samples were taken.



Figure 7. 2015 satellite imagery showing the location of Observation Point 009

OBSERVATION POINT 010

Observation Point 010 was located in an area where massive quantities of coal ash had been hauled and deposited. This resulted in a large area being completely devoid of vegetation. Analysis of the coal ash was completed and will be discussed in the lab analysis section of this report.



View of the fly ash found at Observation Point 010.

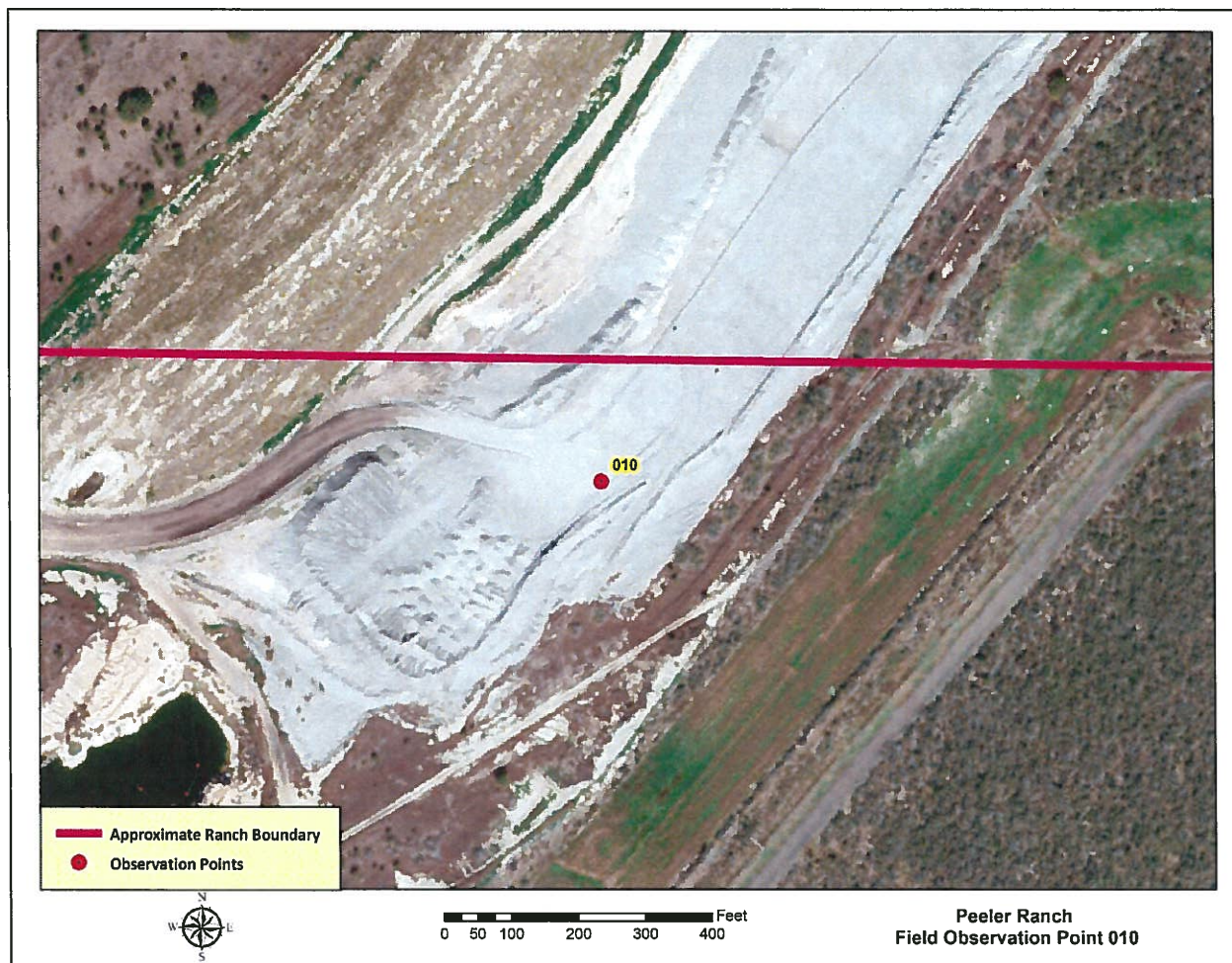


Figure 8. 2015 satellite imagery showing the location of Observation Point 010

Conclusion

After having conversations with the ranch owners and conducting an initial site visit to specified areas on the ranch, the following issues appear to be significant problems on the ranch and should eventually be addressed:

Non-vegetated Areas and Stresses Vegetation: During the site visit, several expansive areas lacking vegetation or supporting stands of stressed vegetation and/or dead trees were observed. Our initial findings indicate that this may be the result of salt deposition via surface waters and groundwater. Many of the areas observed lack vegetation and those areas having vegetation supported stands of salt tolerant species. Most of these areas were located in sites fed by seeps and springs or overflow from ponds that had formed in abandoned mine pits. Characteristics of the clay deposition on these soils further supports high saline conditions.

Saline Water in Ponds and Streams: Most of the ponds and streams found on the ranch do not appear to support healthy populations of aquatic plants or animals. However, waterfowl appear to not be affected to a significant degree by these waters. These symptoms are indicative of brackish or saline water being present. This does not necessarily preempt the potential for other toxins to be present in the water that may have long-term or delayed effects on waterfowl.

Stagnant Water in Ponds and Springs: Several of the ponds and springs observed on the ranch showed strong characteristics of stagnation and/or anaerobic aquatic conditions. This was often characterized by blooms of cyanobacteria or iron bacteria. The cause of the stagnation could not be determined, but could be caused by algal blooms in water that is not being replenished by oxygen rich water. Further work would be required to definitively determine the cause of the stagnation and to develop a method to remove it and make the ponds more palatable to aquatic wildlife.

Disposal of Coal Ash: Field observations indicated that coal ash from the power plant was currently being disposed by depositing it on the surface of the soil in a large area or placing the coal ash in mine pits. Conversations with the Peelers indicated the majority of the stockpile is located off-site, but also includes the on-site property. Coal ash has the potential of contaminating groundwater and surface water and may also cause air pollution by fugitive dust production. Current regulations specify that coal ash must be properly disposed in landfills or surface impoundments. Both of these require composite liner that is comprised of a geomembrane and approximately 2-foot layer of compacted soil. Surface impoundments that are existing may be required to retrofit to meet these requirements or should be closed. It is our opinion that the current method being used for disposal of coal ash may not be in compliance with current rules. This should be further investigated and the solid waste management plan for the power plant should be reviewed to determine if the methodology is compliant with the approved plan.

Restoration of Strip Mine Areas: During the site visit, it was obvious that much of the mining restoration area was dominated by the same plant species, huisache and King Ranch bluestem. Texas mining regulations state that top soils should be removed and stockpiled separate from subsoils. This area is typical of South Texas and tends to support a variety of grasses and woody vegetation. If the original top soils were actually placed on the original surface area, the seed bank present in those soils would result in establishment of plant communities similar to those present prior to mining. Regulations require restoration to be completed in this manner. The fact that the entire area appears to be re-vegetating into a plant community dominated by two species indicates that restoration may have not involved proper stockpiling and replacement of top soils. In order to further research this situation, the surface mine restoration plan should be thoroughly reviewed and vegetation characterized. This information can use to develop a method to mitigate and improve areas where required.

Impacts to Streams and Other Surface Waters: Surface mining is subject to the same rules concerning filling of wetlands and waters of the U.S. as any other activities. Casual observations during the site visit indicate that stream channels and, likely, wetlands were filled and or impeded by strip mining activities. These types of actions fall under the jurisdiction of the U.S. Army Corps of Engineers. Part of the mining plan should have included minimization of negative impacts to waters of the U.S. Again, the surface mining plan and the surface mining restoration plan should be reviewed to determine if proper procedures were used to ensure compliance with current rules protecting waters of the U.S.

**Peeler Ranch
Atascosa County, Texas**

APPENDIX B

Table 1: Summary of Analytical Results - Solids

Table 2: Summary of Analytical Results – Surface Water

Footnotes (Aquatic Life and Human Health RBELs, Livestock (Drinking Water))

SUMMARY OF ANALYTICAL RESULTS - SOLIDS
Peeler Ranch
Atascosa County, Texas

SAMPLE LOCATION				001 (AEI 002)	002 (AEI 010)
SAMPLE TYPE				Soil/Sediment	Ash Waste
DATE SAMPLED				11/13/2017	11/13/2017
UNITS				mg/kg	mg/kg
Trace Metals ICP-MS by SW6020A	TRRP Tier 1 r PCLs (mg/kg) ^{Tot} Soil _{Comb}	TRRP Tier 1 r PCLs (mg/kg) ^{GW} Soil _{ing}	Texas Specific Background Levels (mg/kg)		
Aluminium	64,000	86,000	30,000	21800	7570
Antimony	15	2.7	Not listed	<0.620	<0.557
Arsenic	24	2.5	5.9	7.38	10.9
Barium	8,100	220	300	183	74.3
Beryllium	38	0.92	1.5	0.915	1.43
Cadmium	51	0.75	Not Listed	0.178 J	0.332 J
Calcium	Not Listed	Not Listed	NA	5890	76300
Chromium	27,000	1,200	30	6.36	6.56
Cobalt	370	110	7	3.31	1.34 J
Copper	1,300	520	15	3.95	4.65
Iron	Not Listed	Not Listed	15,000	10600	5770
Lead	500	1.5	15	12.0	5.99
Magnesium	Not Listed	Not Listed	NA	3990	692
Manganese	3,800	580	300	197	94.2
Molybdenum	160	25	NA	1.26 J	2.97
Nickel	840	79	10	4.02	2.73
Potassium	Not Listed	Not Listed	NA	2290	726
Selenium	310	1.1	0.3	2.49	7.85
Silver	97	0.24	Not Listed	<0.124	<0.111
Sodium	Not Listed	Not Listed	Not Listed	20300	1790
Thallium	5.3	0.87	9.3	<0.620	<0.557
Uranium	220	890	NA	2.32 JN	2.13 JN
Vanadium	76	440	50	18.1	21.2
Zinc	9,900	1,200	30	35.3	19.6

Anions by SW9056A					
Bromide	Not Listed	Not Listed	Not Listed	77.9	<2.24
Chloride	Not Listed	Not Listed	3,000 ²	19300	379
Sulfate	Not Listed	Not Listed	Not Listed	5010	8120

Mercury Total by SW7471B					
	2.1 (pH=4.9)	0.0039 (pH=4.9)			
Mercury	5.5 (pH=6.8)	1.0 (pH=6.8)	0.04	<0.0198	0.235

Cyanide by SW9014					
Cyanide, Amenable to Chlorination	43	20	NA	<0.212	<0.195
Cyanide, Total	NA	NA	NA	<0.212	<0.195

Notes:

- 1 - Analytical Results compared for screening purposes to Texas Risk Reduction Program (TRRP) Tier 1 Protective Concentration Levels for a residential 30-acre site (March 2017 tables)
- 2 - Texas Railroad Commission guidance for chloride background levels if site-specific study is not available
- Red** indicates screening level exceedance
- Bold** indicates assessment level based on most conservative value (or Texas Background if higher)
- J = Below laboratory method quantitation limit (MQL)
and above the sample quantitation limit (SQL)
- N - Parameter not NELAC certified

SUMMARY OF ANALYTICAL RESULTS - SURFACE WATER
Peeler Ranch
Atascosa County, Texas

SAMPLE LOCATION						1 (AEI 011)	2 (AEI 003)	3 (AEI 004)	4 (AEI 005)	5 (AEI 006)	6 (AEI 007)	Dup-1 (AEI 007)
DATE SAMPLED						11/13/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017	11/13/2017
UNITS						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
	Recommended Concentration Limits for Livestock (mg/L)	Human Health and Aquatic Life Surface Water Risk-Based Exposure Levels										
		Aquatic Life ^{SW} Benchmarks *		Human Health ^{SW} RBELs *								
		Freshwater Acute Criteria (mg/L)	Freshwater Chronic Criteria (mg/L)	Water and Fish (mg/L)	Fish Only (mg/L)							
Trace Metals: ICP-MS by SW 6020A												
Aluminum	5	0.99 d,a	0.087 d,b	Not listed	Not listed	2.53	0.280	4.90	0.227	0.545	0.467	0.195
Antimony	Not listed	6.60 f	2.20 f	0.006 d	1.071	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800	<0.000800
Arsenic	0.2	0.34 d,a	0.15 d,a	0.010 d, e	0.010 e, j	0.0244	0.0173	0.0206	0.00986	0.0742	0.0279	0.0245
Barium	Not listed	96 e	16 e	2.000 d, e	Not listed	0.0600	0.0554	0.208	0.0408	0.0486	0.0537	0.0504
Beryllium	0.1	0.13 e	0.0053 e	Not listed	Not listed	<0.000300	<0.000300	<0.000300	<0.000300	0.000335 J	<0.000300	<0.000300
Cadmium	0.05	0.0044 d,a,g	0.00015 d,a,g	0.005 d,e	Not listed	<0.000300	0.000389 J	0.000549 J	<0.000300	<0.000300	<0.000300	<0.000300
Calcium	1000	Not listed	Not listed	Not listed	Not listed	543	931	1700	1050	990	878	968
Chromium	0.05	(Trivalent) 0.32 d,a,g	(Trivalent) 0.042	Not listed	Not listed	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Cobalt	1	45 e	1.5 e,p	Not listed	Not listed	<0.00300	<0.00300	0.00335 J	<0.00300	0.00350 J	<0.00300	<0.00300
Copper	0.5 - 5.0	0.00739 d,a,g	0.00524 d,a,g	1.300 b	Not listed	0.00253 J	<0.00200	0.00219 J	<0.00200	<0.00200	<0.00200	<0.00200
Iron	Not listed	Not listed	1 b	Not listed	Not listed	1.08	0.159	2.46	0.900	8.47	0.389	0.202
Lead	0.1	0.03014 d,a,g	0.00117 d,a,g	0.00115 e	0.00383 e	0.00173	0.000398 J	0.00388	0.000309 J	0.000677 J	0.000499 J	<0.000300
Magnesium	125	19.4 e	3.235 e	Not listed	Not listed	38.3	77.2	123	77.6	90.1	75.5	83.8
Manganese	0.05	2.37 d,g,l	1.310 d,g,l,p	0.050 b	0.100 b	0.0907	0.398	4.05	0.931	6.79	1.11	0.895
Molybdenum	0.15	60 d,e	12.7 d,n,p	Not listed	Not listed	0.0157	0.00597	0.00543	0.00469 J	0.0294	0.00742	0.00744
Nickel	1	0.26 d,a,g	0.0289 d,a,g	0.332 e	1.140 e	<0.00300	0.00435 J	0.00354 J	0.00308 J	0.00617 J	<0.00300	<0.00300
Potassium	Not listed	Not listed	Not listed	Not listed	Not listed	23.7	80.4	87.1	82.8	81.3	80.0	87.6
Selenium	0.05	0.02 a	0.005 a	0.050 d	4.200 b	0.00288 J	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Silver	0.05	0.001 d,b,g	0.0001 d,b,h	Not listed	Not listed	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Sodium	Not listed	Not listed	Not listed	Not listed	Not listed	1510	3940	5080	3640	4160	4530	4600
Thallium	Not listed	0.54 f	0.18 f	0.00012	0.00023	<0.000500	<0.000500	<0.000500	0.00122 J	0.000666 J	<0.000500	<0.000500
Uranium	0.2	1.12 d,g,l	0.700 d,g,l,p	Not listed	Not listed	0.0405 N	0.0263 N	0.0549 N	0.0417 N	0.00858 JN	0.0252 N	0.0248 N
Vanadium	0.1	0.284 c	0.02 c	Not listed	Not listed	0.0109	0.000827 J	0.00665	0.000868 J	0.000540 J	0.000980 J	0.000794 J
Zinc	20	0.0651 d,a,g	0.0657d,a,g	7.400 b	26.000 b	0.00708	0.0147	0.0464	0.00670	0.0487	0.00312 J	0.00292 J
Anions by IC Method E300												
Bromide	Not Listed	Not Listed	Not Listed	Not Listed	Not Listed	6.46	11.1	154	133	119	136	NT
Chloride	Not Listed	860 b	230 b	Not listed	Not listed	1180	5420	9590	5740	5350	6070	NT
Sulfate	500	Not Listed	Not Listed	Not Listed	Not Listed	3090	3270	1970	2240	2830	3170	NT
Mercury Total by SW7470A												
Mercury	0.003	0.0024 a	0.0013 a	0.0000122	0.0000122	<0.0000800	<0.0000800	<0.0000800	<0.0000800	<0.0000800	<0.0000800	<0.0000800
Cyanide by M4500-CN E												
Cyanide, Amenable to Chlorination	Not listed	0.0458 a,j	0.0107 a,j	0.200 f, d	Not listed	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
Cyanide, Total	0.01	Not Listed	Not Listed	0.004 b	0.400 b	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100
PH by M4500-H+B												
pH		Not Listed	Not Listed	Not Listed	Not Listed	8.37	7.81	8.46	7.62	6.48	7.65	NT

Notes:

Black bold is the most conservative concentration selected as the assessment level
Bold indicates exceeds limits for livestock or Surface Water Risk-Based Exposure Limits (SW RBELs). Note: Benchmark is equivalent to RBEL.
Bold indicates detection levels are greater than selected assessment level.
Analyte cell highlighted in yellow = assessment level exceedance
J = Below laboratory method quantitation limit (MQL) and above the sample quantitation limit (SQL)
N = Parameter not NELAC certified
Human Health Surface Water Risk-Based Exposure Levels (SW RBELs) based on Texas Surface Water Quality Standards (Title 30, Chapter 307 Rule) adopted February 12, 2014, updated October 2015.
Aquatic Life Surface Water Risk-Based Exposure Levels (SW RBELs) based on Surface Water Benchmarks (August 2016)
Livestock recommended concentration limits provided in the Texas Commission on Environmental Quality (TCEQ) document entitled "Conducting Ecological Risk Assessments at Remediation Sites in Texas (RG-263, revised January 2017).
* Notes are provided on the attached two pages for both the Aquatic Life and Human Health values .



Revised January 2017
RG-263

Conducting Ecological Risk Assessments at Remediation Sites in Texas

anything that lengthens the time to metamorphosis, including COCs in sediment or water, could lead to indirect mortality (see, e.g., Bridges and Semlitsch, 2005) if the water body dries up before metamorphosis is complete. Keep in mind that some amphibians can be exposed to multiple media, for example, Moriarty(2013) reports that frogs are exposed to arsenic via soil, food (invertebrates and plants), and water. Dermal exposure can also be significant, but is currently an understudied exposure route. For example, amphibians indirectly exposed to pesticides (e.g., Atrazine) through contact with contaminated soil had measurable body burdens after eight hours of exposure (Van Meter et al., 2014).

6.6.2 Livestock

Potential risks to livestock receptors such as cattle, horses, goats, and sheep should be evaluated where livestock are known or expected to use a site. Although uptake of COCs by livestock may result in risks to humans (e.g., from consumption of meat or milk), SLERAs should evaluate the potential health risks to the livestock animals themselves as a result of exposure to site COCs. As a commodity, livestock health can be a public concern at affected properties. As ecological receptors, livestock animals are unique in that institutional controls can be used to limit their exposure to COCs. Livestock can be exposed to site COCs by feeding on plants that have accumulated COCs in their tissues, by ingesting impacted soil or sediment that has adhered to food matter, by deliberately or incidentally ingesting impacted soil or sediment, or by ingesting impacted water.

In two instances, the TRRP rule explicitly mentions livestock as potential receptors. First, the Tier 1 checklist (3) characterizes livestock as potential ecological receptors in Subpart B. Affected Property Setting, as evidenced by the text prefacing the exclusion-criterion question: "In answering 'Yes' to the following question, it is understood that the affected property is not attractive to wildlife or livestock, including threatened or endangered species (i.e., the affected property does not serve as valuable habitat, foraging area, or refuge for ecological communities)." Additionally, the rule is specific that the surface water RBEL should preclude toxicity to livestock [30 TAC 350.74 (h)(7)(B)].

6.6.3 Cave-Dwelling Receptors

Texas has a rich but not well-known cave-dwelling fauna consisting of mammals, a bird, fish, amphibians, reptiles, insects, and other invertebrates. According to Reddell (1994), approximately 1,040 terrestrial and 150 aquatic species have been recorded from the state. Although these numbers have undoubtedly increased over the last 20+ years, it is estimated that over 50 percent of these known aquatic species and at least 15 percent of these known terrestrial species are *troglobites*—animals that are specially adapted to subterranean existence and spend their entire lives underground (e.g., endangered salamanders, cave beetles, cave spiders). Troglobites usually have small eyes (or no eyes), long appendages, reduced pigmentation and other adaptations to a subterranean environment. In the last few years, several additional troglobitic species have been discovered in Travis, Williamson, Hays, and Bexar counties, which are among the most intensively studied counties in the state.

6.6.3.1 Habitat Requirements

The habitat of these species includes karst limestone caves and *mesocaverns*, which are humanly impassable voids. *Karst* is a type of terrain formed when calcium carbonate from limestone bedrock is slowly dissolved by mildly acidic groundwater (Veni and Associates, 2008). This process creates numerous caves, sinkholes, fractures, and interconnections so that in places the bedrock resembles a honeycomb. Within this

conservative statistics). A number of protected amphibians (frogs and salamanders) could occur in many Texas counties, particularly along the Texas-Mexico border and in association with springs and karst-cave features (TPWD, 2016b; Gunnar, 2002).

10.4.6.2 Livestock

Water screening values. An adequate and safe water supply is necessary to the production of healthy livestock. Surface water (and groundwater) used by livestock for watering can be impacted by COCs. A number of resources were surveyed to identify drinking-water screening levels for livestock. These screening levels, which are largely for metals and metalloids, are summarized in Table 10.2 and are applicable to surface water and groundwater. Other screening values can be proposed with appropriate justification. Comparing these levels to TRRP groundwater-ingestion PCLs protective of human health (residential), the human health PCLs are generally protective of livestock. However, livestock may be more sensitive than humans in the case of aluminum, copper, cyanide, manganese, selenium, uranium, and vanadium. Alternatively, risks to livestock from COCs in drinking water can also be evaluated in a manner similar to wildlife receptors using dose and HQ calculations based on appropriate exposure assumptions and toxicity values.

Livestock exposure assumptions. Various ingestion rates for water, soil (or sediment), and food for livestock appear in Table 10.3. Where ranges are provided, the person should conservatively select a value that best represents the expected exposure for a site. Alternative exposure assumptions can be used with adequate documentation. Note that livestock water ingestion rates are highly variable. Water consumption rates will differ depending on the dissolved salts in the water, season, shade availability, feed moisture content, age, reproductive status (e.g., pregnant or lactating females), and body weight. The assumed water ingestion rate should be adjusted to reflect the expected site conditions.

Table 10.2. Recommended concentration limits for substances in drinking water for livestock.

COC	Value (mg/L)	Source	Notes
aluminum	5	c	
arsenic	0.2	b	
beryllium	0.1	a	
boron	5	c	
cadmium	0.05	b	
calcium	1000	c	Assumes calcium is dominant cation and dietary phosphorus levels are adequate. Tolerable levels may be lower with elevated dietary magnesium and sodium or if calcium is added as a feed supplement.
chromium	0.05	a	
cobalt	1	b	
copper	0.5-5.0	a	1.0 mg/L (cattle); 5.0 mg/L (avian, swine); 0.5 mg/L (sheep)
cyanide	0.01	e	specific to horses
fluoride	2.0	c	1.0 mg/L if feed contains F-
lead	0.1	b	
magnesium	125	e	specific to horses; decreased palatability rather than toxicity
manganese	0.05	e, f	specific to horses and cattle
mercury	0.003	a	
molybdenum	0.15	c	
nickel	1	b	
nitrate (NO ₃ ⁻)	400	c	
nitrite (NO ₂ ⁻)	30	c	
nitrate + nitrite N	100	a	as NO ₃ + NO ₂ -N

COC	Value (mg/L)	Source	Notes
selenium	0.05	a, e	0.01 mg/L for horses
silver	0.05	e	specific to horses
sulfate (SO ₄ ²⁻)	500	d	important to consider total dietary contribution of sulfur
uranium	0.2	c	
vanadium	0.1	b	
zinc	20	c	

a. CCME, 2016.

b. NAS, 1974 (see Table 13).

c. ANZECC, 2000.

d. Morgan, 2011.

e. Lewis, 1996.

f. Higgins et al., 2008.

Soil ingestion rates, as a percent of food ingestion, are suggested in Table 10.3 for some livestock animals. Although livestock may intentionally ingest soil to satisfy a mineral nutrient imbalance, soil ingested accidentally by grazing livestock can sometimes form a considerable proportion of the diet. Grazing animals can ingest soil (or sediment) that adheres to vegetation, or ingest soil directly from the surface while they feed or lick their snouts and fur. See Abrahams (2005) and Herlin and Andersson (1996) for a general discussion of soil ingestion by livestock. Soil ingestion will generally increase with grazing intensity, root intake, management practices that may increase the amount of soil on vegetation, and decreased forage availability. Additionally, assumed soil ingestion percentages may need to be conservatively adjusted where the pasture vegetative cover is decreased (e.g., more exposure to soil while grazing).

Food consumption rates also appear in Table 10.3. Rates will vary with body weight, age, season, water availability, animal condition, activity level, level of milk production, stage of production, forage quality, amount and type of supplement or feed provided, and shelter. Rates presented on a body-weight basis are preferred. Additionally, exposure assumptions may be modified to account for exposure duration and exposure areas relative to specific livestock-management practices. Where dose calculations are performed, they should ideally consider the total COC dose to the animal [i.e., in water, soil, forage, and feed supplements (if known or can be predicted)].

Surface Water Benchmarks (mg/L) for Metals, Inorganics

Chemical of Concern	CAS No.	Freshwater Acute Benchmark (mg/L)	Freshwater Chronic Benchmark (mg/L)	Saltwater Acute Benchmark (mg/L)	Saltwater Chronic Benchmark (mg/L)
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Notes Page - Aquatic Life Surface Water Benchmarks

COCs listed in bold and italics are considered bioaccumulative.

- a Criteria are from Texas Surface Water Quality Standards (30 TAC Chapter 307.6, Table 1).
- b National Ambient Water Quality Criteria (EPA, 2016). Note: chronic value for aluminum is not based on the dissolved fraction.
- c Benchmarks from G.W. Suter, II, and C.L. Tsao. 1996. *Toxicological benchmarks for screening potential contaminants of concern for effects on aquatic biota*. Revised. Oak Ridge, TN: Lockheed Martin Energy Systems, U.S. Department of Energy. ES/ER/TM-96/R2. Value for boron recalculated due to units in error in Suter and Tsao (1996).
- d Indicates that the benchmarks are for the dissolved portion in water. Unless noted with a *d*, criteria are for total concentrations in water.
- e Benchmark derived by TCEQ using the LC₅₀ approach in accordance with methodology defined in the Texas Surface Water Quality Standards 30 TAC 307.6 (c) (7) before 2016.
- f Benchmark derived by TCEQ using the LC₅₀ approach in accordance with methodology defined in the Texas Surface Water Quality Standards 30 TAC 307.6 (c) (7).
- g Criteria calculated using an assumed hardness of 50 mg/L as CaCO₃. The hardness-based formulas are included on a separate sheet. The person should use the lower 15th-percentile hardness value for the nearest downstream classified segment as listed in TCEQ (2011), *Procedures to Implement the Texas Surface Water Quality Standard*. Alternatively, site-specific hardness values may be used. See discussion in 3.2.3 of of TRRP-24.
- h There is only an acute criterion (no chronic criterion). The indicated value is the acute criterion divided by 10.
- i In designated oyster waters, an acute saltwater copper criterion of 3.6 micrograms per liter applies outside of the mixing zone of permitted discharges, and specified mixing zones for copper will not encompass oyster reefs containing live oysters.
- j Analytical method for available cyanide should be used.
- k Criteria are variable depending on pH and temperature. Values conservatively based on a pH of 8.0 and temperature of 30° C. Assumes mussels are present. Value can be recalculated using the formulas in the U.S. EPA 2013 freshwater criteria document for ammonia. Any recalculation should be accompanied by a justification for the pH and temperature values that are assumed.
- l State of Colorado hardness-based water quality standard (Colorado Department of Public Health and Environment, 2013. Water Quality Control Commission. Regulation No. 31. Effective Jan. 31, 2013).
- m Canadian Council of Ministers of the Environment. Canadian Water Quality Guidelines for the Protection of Aquatic Life. Fact Sheets available on derivation of individual values.

Note Page for Aquatic Life Benchmarks

Surface Water Benchmarks (mg/L) for Metals, Inorganics

Chemical of Concern	CAS No.	Freshwater Acute Benchmark (mg/L)	Freshwater Chronic Benchmark (mg/L)	Saltwater Acute Benchmark (mg/L)	Saltwater Chronic Benchmark (mg/L)
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n Heijerick, D.G., L. Regoli, and S. Carey. 2012. The toxicity of molybdate to freshwater and marine organisms. II. Effects assessment of molybdate in the aquatic environment under REACH. *Science of the Total Environment*. 435-436: 179-87.

o Based on the procedure defined in TCEQ, 2010, *Procedures to Implement the Texas Surface Water Quality Standards*. The percentage of dissolved silver that is in the free ionic form is estimated from the following regression equation:

$$Y = e^{\left(\frac{1}{0.6559 + 0.0044 \text{ Cl}}\right)}$$

where Y = percentage of dissolved silver that is in free ionic form, and Cl = dissolved chloride concentration (mg/L). The person should use the 50th-percentile chloride value (from TCEQ, 2011) for the nearest downstream segment unless site-specific data are available. Because there is no readily available means to predict the percent free ion in marine waters, silver should be evaluated as dissolved silver alone. See 5.2.1 of ERAG and the *Implementation Procedures* for more information.

p If the water body is used as drinking water for livestock, the freshwater chronic value becomes: cobalt 1 mg/L (NAS, 1974) , manganese 0.05 mg/L (Lewis, 1996; Higgins, 1998), molybdenum 0.3 mg/L (ANZECC, 2000) and uranium 0.2 mg/L (ANZECC, 2000). Use total-metals concentrations. These values are not hardness dependent. See supporting documentation for additional information and complete listing of sources.

q McPherson, C.A., D.H.Y. Lee, and P.M. Chapman. 2014. Development of a fluoride chronic effects benchmark for aquatic life in freshwater. *Environ. Toxicol. Chem.* 33(11): 2621-27.

r McPherson, C.A., G.S. Lawrence, J.R. Elphick, and P.M. Chapman. 2014. Development of a strontium chronic effects benchmark for aquatic life in freshwater. *Environ. Toxicol. and Chem.* 33(11): 2472-78.

End of Worksheet

Notes Page - Human Health Surface Water Risk-Based Exposure Limits (SWRBELs)

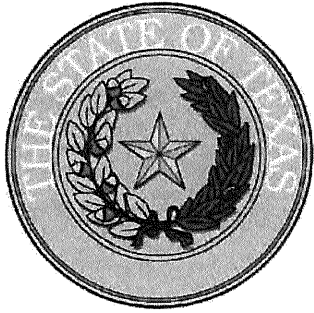
a	If no reference, the value is based on the current Texas Surface Water Quality Standard (see 30 TAC §307.6(d)(1), effective March 6, 2014).
b	National Recommended Water Quality Criterion. Available on-line at: http://water.epa.gov/scitech/swguidance/standards/criteria/health/ . Accessed August 26, 2015. Carcinogens were adjusted to a 10-5 risk level.
c	Consists of <i>m</i> , <i>o</i> , and <i>p</i> Cresols. The criteria are the same for all 3, and the criteria are applied independently to each form of cresol. CASRNs for cresols are 95-48-7 for <i>o</i> -Cresol, 108-39-4 for <i>m</i> -Cresol, and 106-44-5 for <i>p</i> -Cresol.
d	Based on Maximum Contaminant Levels (MCLs) specified in 30 TAC §290 (relating to Public Drinking Water) and referenced as so in the TSWQS. Applies to the "Water and Fish" value.
e	Indicates the criteria are for the dissolved fraction in water. All other criteria are for total recoverable concentrations except where noted.
f	Compliance is determined using the analytical method for available cyanide.
g	Based on Maximum Contaminant Levels (MCLs) specified in 30 TAC §290. Applies to the "Water and Fish" value.
h	Until Method 1668 or equivalent method to measure PCB congeners is approved in 40 Code of Federal Regulations Part 136, compliance with PCB criteria is determined using Arochlor data or any alternate method listed in a TCEQ-approved Quality Assurance Plan.
i	The current federal criterion is 400 ug/L. This is lower than the TSWQS "water and fish" value. The "water and fish" value will be used until such time that the state or federal criterion is revised.
j	The current federal criterion is 1.4 ug/L for the inorganic form only, based on a carcinogenicity of 10-5 risk. This is lower than the TSWQS "water and fish" value, which is based on the federal MCL. The "water and fish" value will be used until such time that the state or federal criterion is revised.
k	The current federal criterion is 4 ug/L. This is lower than the TSWQS "water and fish" value, which is based on the federal MCL. The "water and fish" value will be used until such time that the state or federal criterion is revised.
l	The current federal criterion is 520 ug/L. This is lower than the TSWQS "water and fish" value, which is based on the federal MCL. The "water and fish" value will be used until such time that the state or federal criterion is revised.

**Peeler Ranch
Atascosa County, Texas**

APPENDIX C

**National Environmental Laboratory Accreditation
Program (NELAP) Certificate**

Laboratory Analytical Report



Texas Commission on Environmental Quality

NELAP-Recognized Laboratory Accreditation is hereby awarded to



DHL Analytical, Inc.
2300 Double Creek Drive
Round Rock, TX 78664-3801

in accordance with Texas Water Code Chapter 5, Subchapter R, Title 30 Texas Administrative Code Chapter 25, and the National Environmental Laboratory Accreditation Program.

The laboratory's scope of accreditation includes the fields of accreditation that accompany this certificate. Continued accreditation depends upon successful ongoing participation in the program. The Texas Commission on Environmental Quality urges customers to verify the laboratory's current location(s) and accreditation status for particular methods and analyses (www.tceq.texas.gov/goto/lab). Accreditation does not imply that a product, process, system or person is approved by the Texas Commission on Environmental Quality.

Certificate Number: T104704211-17-19

Effective Date: 5/1/2017

Expiration Date: 4/30/2018

A handwritten signature in black ink, appearing to read "R. A. Hylb", written over a horizontal line.

**Executive Director Texas Commission on
Environmental Quality**



November 22, 2017

Suzanne Green
Geo Strata Environmental Consultants
4718 College Park
San Antonio, TX 78249
TEL: (210) 492-2558
FAX (210) 492-8935
RE: Peeler Ranch

Order No.: 1711118

Dear Suzanne Green:

DHL Analytical, Inc. received 9 sample(s) on 11/14/2017 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in red ink, appearing to read "John DuPont".

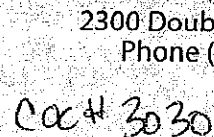
John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-17-19



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CHAIN-OF-CUSTODY

DATE: 11/13/17 / Code 4134 PAGE 1 OF 1
PO #: 649056 DHL WORK ORDER #: 171118
PROJECT LOCATION OR NAME: Peeler Ranch
CLIENT PROJECT #: 975 SA-Other COLLECTOR: OK

[illegible]

30020

00100

FedEx
ExpressPackage
US AirbillFedEx
Tracking
Number

8111 6191 7699

17317

fedex.com 1.800.GoFedEx 1.800.463.3339

1 From
Date 11/13/17
Sender's Name _____ Phone _____
Company GEO STRATA ENVIRONMENTAL
Address 4718 COLLEGE PARK Dept./Floor/Suite/Room _____
City SAN ANTONIO State TX ZIP 78247-4008

2 Your Internal Billing Reference Peeler 875-SA-0114

3 To
Recipient's Name DHL Analyst Phone 512 388-8222
Company _____
Address 2300 Double Creek Dept./Floor/Suite/Room _____
We cannot deliver to P.O. boxes or P.O. ZIP codes.
Address _____
Use this line for the HOLD location address or for continuation of your shipping address.
City Round Rock State TX ZIP 78664



8111 6191 7699

0125810849

CUSTODY SEAL

DATE

SIGNATURE

11/13/17
[Signature]

4 Express Package Service * To most locations. Packages up to 150 lbs. For packages over 150 lbs, use the FedEx Express Freight US Airbill.

Next Business Day
☐ FedEx First Overnight
☒ FedEx Priority Overnight
☐ FedEx Standard Overnight

2-3 Business Days
☐ FedEx 2Day A.M.
☐ FedEx 2Day
☐ FedEx Express Saver

5 Packaging * Declared value limit \$500.
☐ FedEx Envelope* ☐ FedEx Pak* ☐ FedEx Box ☐ FedEx Tube ☒ Other

6 Special Handling and Delivery Signature Options Fees may apply. See the FedEx Service Guide.
☐ Saturday Delivery
☐ No Signature Required
☐ Direct Signature
☐ Indirect Signature
☒ Does this shipment contain dangerous goods?
☒ No ☐ Yes ☐ Yes ☐ Dry Ice ☐ Cargo Aircraft Only
☐ As per attached Shipper's Declaration ☐ Shipper's Declaration not required
 Restrictions apply for dangerous goods - see the current FedEx Service Guide.

7 Payment Bill to:
 Sender ☒ Acct. No. in Section 1 we'll bill ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check
 Enter FedEx Acct. No. or Credit Card No. below. Obtain recip. Acct. No. ☐
 Total Packages _____ Total Weight 31 lbs. Credit Card Auth. 611
 Our liability is limited to US\$100 unless you declare a higher value. See the current FedEx Service Guide for details.

Rev. Date 5/15 • Part #163134 • ©1991-2015 FedEx • PRINTED IN U.S.A. SSM

QEC

Quality Environmental Containers
 800-255-3950 • 304-255-3900

Sample Receipt Checklist

Client Name Geo Strata Environmental Consultants

Date Received: 11/14/2017

Work Order Number 1711118

Received by EL

Checklist completed by:


Signature

11/14/2017

Date

Reviewed by


Initials

11/14/2017

Date

Carrier name FedEx 1day

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	4.3 °C
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH<2 acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/> LOT # 11837
	Adjusted? <u>no</u>		Checked by <u>EL</u>
Water - pH>9 (S) or pH>12 (CN) acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/> LOT # 11707
	Adjusted? <u>no</u>		Checked by <u>EL</u>

Any No response must be detailed in the comments section below.

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action _____

Laboratory Name: DHL Analytical, Inc.								
Laboratory Review Checklist: Reportable Data								
Project Name: Peeler Ranch				LRC Date: 11/22/2017				
Reviewer Name: Angie O'Donnell				Laboratory Work Order: 1711118				
Prep Batch Number(s): See Prep Dates Report				Run Batch: See Analytical Dates Report				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵	
R1	OI	Chain-of-Custody (C-O-C)						
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X					R1-01
		2) Were all departures from standard conditions described in an exception report?			X			
R2	OI	Sample and Quality Control (QC) Identification						
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X					
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X					
R3	OI	Test Reports						
		1) Were all samples prepared and analyzed within holding times?	X					
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X					
		3) Were calculations checked by a peer or supervisor?	X					
		4) Were all analyte identifications checked by a peer or supervisor?	X					
		5) Were sample detection limits reported for all analytes not detected?	X					
		6) Were all results for soil and sediment samples reported on a dry weight basis?	X					
		7) Were % moisture (or solids) reported for all soil and sediment samples?	X					
		8) Were bulk soils/solids samples for volatile analysis extracted with methanol per EPA Method 5035?			X			
		9) If required for the project, TICs reported?			X			
R4	O	Surrogate Recovery Data						
		1) Were surrogates added prior to extraction?			X			
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X			
R5	OI	Test Reports/Summary Forms for Blank Samples						
		1) Were appropriate type(s) of blanks analyzed?	X					
		2) Were blanks analyzed at the appropriate frequency?	X					
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X					
		4) Were blank concentrations < MDL?		X			R5-04	
		5) For analyte(s) detected in a blank sample, was the concentration, unadjusted for sample specific factors, in all associated field samples, greater than 10 times the concentration in the blank sample?			X			
R6	OI	Laboratory Control Samples (LCS):						
		1) Were all COCs included in the LCS?	X					
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X					
		3) Were LCSs analyzed at the required frequency?	X					
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X					
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X					
		6) Was the LCSD RPD within QC limits (if applicable)?	X					
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data						
		1) Were the project/method specified analytes included in the MS and MSD?	X					
		2) Were MS/MSD analyzed at the appropriate frequency?	X					
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			R7-02	
		4) Were MS/MSD RPDs within laboratory QC limits?		X			R7-04	
R8	OI	Analytical Duplicate Data						
		1) Were appropriate analytical duplicates analyzed for each matrix?	X					
		2) Were analytical duplicates analyzed at the appropriate frequency?	X					
		3) Were RPDs or relative standard deviations within the laboratory QC limits?		X			R8-03	
R9	OI	Method Quantitation Limits (MQLs):						
		1) Are the MQLs for each method analyte included in the laboratory data package?	X					
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X					
		3) Are unadjusted MQLs and DCSs included in the laboratory data package?	X					
R10	OI	Other Problems/Anomalies						
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X					
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference affects on the sample results?	X					
		3) Is the laboratory NELAC-accredited under the Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X					

Laboratory Name: DHL Analytical, Inc.							
Laboratory Review Checklist (continued): Supporting Data							
Project Name: Peeler Ranch				LRC Date: 11/22/2017			
Reviewer Name: Angie O'Donnell				Laboratory Work Order: 1711118			
Prep Batch Number(s): See Prep Dates Report				Run Batch: See Analytical Dates Report			
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	Initial Calibration (ICAL)					
		1) Were response factors and/or relative response factors for each analyte within QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	Initial and Continuing calibration Verification (ICCV and CCV) and Continuing Calibration blank (CCB):					
		1) Was the CCV analyzed at the method-required frequency?		X			S2-01
		2) Were percent differences for each analyte within the method-required QC limits?		X			S2-02
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?	X				
S3	O	Mass Spectral Tuning:					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	Internal Standards (IS):					
		1) Were IS area counts and retention times within the method-required QC limits?		X			S4-01
S5	OI	Raw Data (NELAC Section 5.5.10)					
		1) Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	Dual Column Confirmation					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively Identified Compounds (TICs):					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) Results:					
		1) Were percent recoveries within method QC limits?	X				
S9	I	Serial Dilutions, Post Digestion Spikes, and Method of Standard Additions					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?		X			S9-01
S10	OI	Method Detection Limit (MDL) Studies					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?		X			S10-02
S11	OI	Proficiency Test Reports:					
		1) Was the lab's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards Documentation					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound/Analyte Identification Procedures					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of Analyst Competency (DOC)					
		1) Was DOC conducted consistent with NELAC Chapter 5 – Appendix C?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification/Validation Documentation for Methods (NELAC Chapter 5)					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory Standard Operating Procedures (SOPs):					
		1) Are laboratory SOPs current and on file for each method performed?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).

3 NA = Not applicable.

4 NR = Not Reviewed.

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

Laboratory Data Package Signature Page – RG-366/TRRP-13

This data package consists of:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation;
- R2 Sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC Chapter 5,
 - b) dilution factors,
 - c) preparation methods,
 - d) cleanup methods, and
 - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
 - a) Calculated recovery (%R), and
 - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amounts,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %Rs and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) The amount of analyte measured in the duplicate,
 - b) The calculated RPD, and
 - c) The laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) and detectability check sample results for each analyte for each method and matrix;
- R10 Other problems or anomalies.

The Exception Report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory is not accredited under the Texas Laboratory Accreditation Program.

Release Statement: I am responsible for the release of this laboratory data package. This laboratory is accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm to the best of my knowledge that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information or data affecting the quality of the data has been knowingly withheld.

This laboratory was last inspected by TCEQ on March 27, 2017. Any findings affecting the data in this laboratory data package are noted in the Exception Reports herein. The official signing the cover page of the report in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

Name: John DuPont
Official Title: General Manager


Signature

11/22/17
Date

Name: Scott Schroeder
Official Title: Technical Director

CLIENT: Geo Strata Environmental Consultants
Project: Peeler Ranch
Lab Order: 1711118

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Method SW6020A - Metals Analysis
Method SW6020A - Uranium Analysis (This parameter is not NELAC Certified)
Method SW7470A/7471B - Mercury Analysis
Method E300/SW9056A - Anions Analysis
Method M4500-CN E/SW9014 - Cyanide Analysis
Method M4500-H+ B - pH Analysis
Method D2216 - Percent Moisture Analysis

Exception Report R1-01

Samples were received and login performed on 11/14/2017. A total of 9 samples were received and analyzed. The samples arrived in good condition and were properly packaged.

Exception Report R5-04

For Metals Analysis, for soil Batch 83247, Sodium was detected below the reporting limits for Method Blank-83247. This analyte was detected in the associated samples at greater than 10x the amount detected in the blank. No further corrective action was taken.

Exception Report R7-03 and R7-04

For Anions Analysis, for water Batch 83252, the recoveries/RPDs of up to three anions for the Matrix Spike and Matrix Spike Duplicate (1711118-08 MS/MSD) were outside of the method control limits. These are flagged accordingly in the QC Summary Report. These anions were within method control limits in the associated LCS. No further corrective action was taken.

For Metals Analysis, for water Batch 83242, the recoveries/RPDs of up to twelve analytes for the Matrix Spike and Matrix Spike Duplicate (1711126-01 MS/MSD) were outside of the method control limits. These are flagged accordingly in the QC Summary Report. These analytes were within method control limits in the associated LCS. No further corrective action was taken.

For Metals Analysis, for soil Batch 83247, the recoveries/RPDs of up to seven analytes for the Matrix Spike and Matrix Spike Duplicate (1711110-02 MS/MSD) were outside of the method control limits. These are flagged accordingly in the QC Summary Report. These analytes were within method control limits in the associated LCS. No further corrective action was taken.

Exception Report R8-03

CLIENT: Geo Strata Environmental Consultants
Project: Peeler Ranch
Lab Order: 1711118

CASE NARRATIVE

For Anions Analysis, for water Batch 83252, the RPDs of two anions for the Matrix Spike Duplicate (1711118-08 Dup) were above the method control limit. These are flagged accordingly in the QC Summary Report. These anions were within method control limits in the associated LCS. No further corrective action was taken.

Exception Report S2-01

For Cyanide Analysis, for aqueous samples performed on 11/17/2017, the method specifies that ten samples are to be analyzed between the continuing calibrations. More than 10 samples (12) were analyzed between CCV1-171117 and CCV2-171117, due to analyst oversight. No further corrective action was taken.

Exception Report S2-02

For Metals Analysis, the recovery of Beryllium for Continuing Calibration Verifications (CCV1/CCV2 - 171116) was slightly below the method control limits. This analyte was within the method control limits in the associated LCVLs. No further corrective action was taken.

For Metals Analysis, the recoveries of Vanadium and Sodium for various Low Level Calibration Verification(s) were above the method control limits. These are flagged accordingly in the QC Summary Report. The analyte Vanadium may be biased high in the associated samples. The analyte Sodium was detected at greater than 10x the amount detected in the LCVL. These analytes meet method control limits in the associated bracketing QC. No further corrective action was taken.

Exception Report S4-01

For Metals Analysis, for aqueous samples, the response factor of Internal Standard Bismuth for several samples was below the method control limit, due to matrix interference. The affected analytes Lead and Uranium, may be biased high. No further corrective action was taken.

For Uranium Analysis, for aqueous samples, the response factor of Internal Standard Bismuth for the Matrix Spike, Matrix Spike Duplicate and the Post Digestion Spike (1711126-01 MS/MSD/PDS) was below the method control limit, due to matrix interference. The affected analyte, Uranium, was within method control limits in the these QC samples. No further corrective action was taken.

Exception Report S9-01

For Metals Analysis, for soil Batch 83247, the RPDs of three analytes for the Serial Dilution (1711110-02 SD) were above the method control limit. These are flagged accordingly in the QC Summary Report. These analytes were within method control limits in the associated Post Digestion Spike. No further corrective action was taken.

CLIENT: Geo Strata Environmental Consultants
Project: Peeler Ranch
Lab Order: 1711118

CASE NARRATIVE

Exception Report S10-02

For Metals Analysis, the recoveries of three analytes for various Detectability Check Standards were outside of the DHL Analytical internal control limits; the recoveries meet the TRRP specifications. These are flagged accordingly in the QC Summary report. These analytes were within method control limits in the daily calibration. No further corrective action was taken.

CLIENT: Geo Strata Environmental Consultants
Project: Peeler Ranch
Lab Order: 1711118**Work Order Sample Summary**

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recved
1711118-01	001		11/13/17 11:45 AM	11/14/2017
1711118-02	002		11/13/17 12:30 PM	11/14/2017
1711118-03	003		11/13/17 01:00 PM	11/14/2017
1711118-04	004		11/13/17 01:10 PM	11/14/2017
1711118-05	005		11/13/17 01:30 PM	11/14/2017
1711118-06	006		11/13/17 01:37 PM	11/14/2017
1711118-07	Dup-1		11/13/17 01:55 PM	11/14/2017
1711118-08	001		11/13/17 11:45 AM	11/14/2017
1711118-09	002		11/13/17 02:30 PM	11/14/2017

Lab Order: 1711118
Client: Geo Strata Environmental Consultants
Project: Peeler Ranch

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1711118-01A	001	11/13/17 11:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	001	11/13/17 11:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	001	11/13/17 11:45 AM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	001	11/13/17 11:45 AM	Aqueous	SW7470A	Mercury Aq Prep	11/16/17 08:07 AM	83245
1711118-01B	001	11/13/17 11:45 AM	Aqueous	M4500-CN E	Cyanide Water Prep	11/17/17 09:05 AM	83271
1711118-01C	001	11/13/17 11:45 AM	Aqueous	E300	Anion Preparation	11/14/17 01:24 PM	83219
	001	11/13/17 11:45 AM	Aqueous	E300	Anion Preparation	11/15/17 09:08 AM	83234
	001	11/13/17 11:45 AM	Aqueous	E300	Anion Preparation	11/16/17 09:06 AM	83250
	001	11/13/17 11:45 AM	Aqueous	M4500-H+ B	pH Preparation	11/15/17 10:58 AM	83243
1711118-02A	002	11/13/17 12:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	002	11/13/17 12:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	002	11/13/17 12:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	002	11/13/17 12:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	002	11/13/17 12:30 PM	Aqueous	SW7470A	Mercury Aq Prep	11/16/17 08:07 AM	83245
1711118-02B	002	11/13/17 12:30 PM	Aqueous	M4500-CN E	Cyanide Water Prep	11/17/17 09:05 AM	83271
1711118-02C	002	11/13/17 12:30 PM	Aqueous	E300	Anion Preparation	11/14/17 01:24 PM	83219
	002	11/13/17 12:30 PM	Aqueous	E300	Anion Preparation	11/15/17 09:08 AM	83234
	002	11/13/17 12:30 PM	Aqueous	E300	Anion Preparation	11/15/17 09:08 AM	83234
	002	11/13/17 12:30 PM	Aqueous	M4500-H+ B	pH Preparation	11/15/17 10:58 AM	83243
	002	11/13/17 12:30 PM	Aqueous	M4500-H+ B	pH Preparation	11/15/17 10:58 AM	83243
1711118-03A	003	11/13/17 01:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	003	11/13/17 01:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	003	11/13/17 01:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	003	11/13/17 01:00 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	003	11/13/17 01:00 PM	Aqueous	SW7470A	Mercury Aq Prep	11/16/17 08:07 AM	83245
1711118-03B	003	11/13/17 01:00 PM	Aqueous	M4500-CN E	Cyanide Water Prep	11/17/17 02:20 PM	83271
1711118-03C	003	11/13/17 01:00 PM	Aqueous	E300	Anion Preparation	11/14/17 01:24 PM	83219
	003	11/13/17 01:00 PM	Aqueous	E300	Anion Preparation	11/15/17 09:08 AM	83234
	003	11/13/17 01:00 PM	Aqueous	M4500-H+ B	pH Preparation	11/15/17 10:58 AM	83243

Lab Order: 1711118
Client: Geo Strata Environmental Consultants
Project: Peeler Ranch

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1711118-04A	004	11/13/17 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	004	11/13/17 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	004	11/13/17 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	004	11/13/17 01:10 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	004	11/13/17 01:10 PM	Aqueous	SW7470A	Mercury Aq Prep	11/16/17 08:07 AM	83245
1711118-04B	004	11/13/17 01:10 PM	Aqueous	M4500-CN E	Cyanide Water Prep	11/17/17 02:20 PM	83271
1711118-04C	004	11/13/17 01:10 PM	Aqueous	E300	Anion Preparation	11/14/17 01:24 PM	83219
	004	11/13/17 01:10 PM	Aqueous	E300	Anion Preparation	11/15/17 09:08 AM	83234
	004	11/13/17 01:10 PM	Aqueous	M4500-H+ B	pH Preparation	11/15/17 10:58 AM	83243
1711118-05A	005	11/13/17 01:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	005	11/13/17 01:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	005	11/13/17 01:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	005	11/13/17 01:30 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	005	11/13/17 01:30 PM	Aqueous	SW7470A	Mercury Aq Prep	11/16/17 08:07 AM	83245
1711118-05B	005	11/13/17 01:30 PM	Aqueous	M4500-CN E	Cyanide Water Prep	11/17/17 02:20 PM	83271
1711118-05C	005	11/13/17 01:30 PM	Aqueous	E300	Anion Preparation	11/14/17 01:24 PM	83219
	005	11/13/17 01:30 PM	Aqueous	E300	Anion Preparation	11/15/17 09:08 AM	83234
	005	11/13/17 01:30 PM	Aqueous	M4500-H+ B	pH Preparation	11/15/17 10:58 AM	83243
1711118-06A	006	11/13/17 01:37 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	006	11/13/17 01:37 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	006	11/13/17 01:37 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	006	11/13/17 01:37 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	006	11/13/17 01:37 PM	Aqueous	SW7470A	Mercury Aq Prep	11/16/17 08:07 AM	83245
1711118-06B	006	11/13/17 01:37 PM	Aqueous	M4500-CN E	Cyanide Water Prep	11/17/17 02:20 PM	83271
1711118-06C	006	11/13/17 01:37 PM	Aqueous	E300	Anion Preparation	11/14/17 01:24 PM	83219
	006	11/13/17 01:37 PM	Aqueous	E300	Anion Preparation	11/15/17 09:08 AM	83234
	006	11/13/17 01:37 PM	Aqueous	M4500-H+ B	pH Preparation	11/15/17 10:58 AM	83243
1711118-07A	Dup-1	11/13/17 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242

Lab Order: 1711118
Client: Geo Strata Environmental Consultants
Project: Peeler Ranch

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1711118-07A	Dup-1	11/13/17 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	Dup-1	11/13/17 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	Dup-1	11/13/17 01:55 PM	Aqueous	SW3005A	Aq Prep Metals : ICP-MS	11/15/17 10:53 AM	83242
	Dup-1	11/13/17 01:55 PM	Aqueous	SW7470A	Mercury Aq Prep	11/16/17 08:07 AM	83245
1711118-07B	Dup-1	11/13/17 01:55 PM	Aqueous	M4500-CN E	Cyanide Water Prep	11/17/17 02:20 PM	83271
1711118-08A	001	11/13/17 11:45 AM	Soil	SW9056A	Anion Prep	11/16/17 09:06 AM	83252
	001	11/13/17 11:45 AM	Soil	SW9056A	Anion Prep	11/16/17 09:06 AM	83252
	001	11/13/17 11:45 AM	Soil	SW9010C	Cyanide Soil Prep	11/20/17 01:05 PM	83314
	001	11/13/17 11:45 AM	Soil	SW7471B	Mercury Soil Prep, Total	11/16/17 03:04 PM	83266
	001	11/13/17 11:45 AM	Soil	D2216	Moisture Preparation	11/17/17 09:59 AM	83276
	001	11/13/17 11:45 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	11/16/17 08:19 AM	83247
	001	11/13/17 11:45 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	11/16/17 08:19 AM	83247
	001	11/13/17 11:45 AM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	11/16/17 08:19 AM	83247
1711118-09A	002	11/13/17 02:30 PM	Soil	SW9056A	Anion Prep	11/16/17 09:06 AM	83252
	002	11/13/17 02:30 PM	Soil	SW9056A	Anion Prep	11/16/17 09:06 AM	83252
	002	11/13/17 02:30 PM	Soil	SW7471B	Mercury Soil Prep, Total	11/16/17 03:04 PM	83266
	002	11/13/17 02:30 PM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	11/16/17 08:19 AM	83247
	002	11/13/17 02:30 PM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	11/16/17 08:19 AM	83247
	002	11/13/17 02:30 PM	Soil	SW3050B	Soil Prep Total Metals: ICP-MS	11/16/17 08:19 AM	83247
1711118-09B	002	11/13/17 02:30 PM	Soil	SW9010C	Cyanide Soil Prep	11/20/17 01:05 PM	83314
	002	11/13/17 02:30 PM	Soil	D2216	Moisture Preparation	11/17/17 09:59 AM	83276

Lab Order: 1711118
Client: Geo Strata Environmental Consultants
Project: Peeler Ranch

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1711118-01A	001	Aqueous	SW7470A	Mercury Total: Aqueous	83245	1	11/16/17 03:29 PM	CETAC2_HG_171116B
	001	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	1	11/16/17 11:25 AM	ICP-MS4_171116A
	001	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	100	11/17/17 11:06 AM	ICP-MS4_171117A
	001	Aqueous	SW6020A	Uranium in Water by ICPMS	83242	1	11/16/17 11:25 AM	ICP-MS4_171116B
1711118-01B	001	Aqueous	M4500-CN E	Cyanide - Water Sample	83271	1	11/17/17 01:57 PM	UV/VIS_2_171117A
1711118-01C	001	Aqueous	E300	Anions by IC method - Water	83219	100	11/14/17 06:49 PM	IC4_171114A
	001	Aqueous	E300	Anions by IC method - Water	83234	10	11/15/17 07:31 PM	IC4_171115A
	001	Aqueous	E300	Anions by IC method - Water	83250	1	11/16/17 05:06 PM	IC4_171116A
	001	Aqueous	M4500-H+ B	pH	83243	1	11/15/17 11:30 AM	TITRATOR_171115A
1711118-02A	002	Aqueous	SW7470A	Mercury Total: Aqueous	83245	1	11/16/17 03:40 PM	CETAC2_HG_171116B
	002	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	100	11/17/17 11:08 AM	ICP-MS4_171117A
	002	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	500	11/20/17 11:13 AM	ICP-MS4_171120B
	002	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	1	11/16/17 11:27 AM	ICP-MS4_171116A
	002	Aqueous	SW6020A	Uranium in Water by ICPMS	83242	1	11/16/17 11:27 AM	ICP-MS4_171116B
1711118-02B	002	Aqueous	M4500-CN E	Cyanide - Water Sample	83271	1	11/17/17 01:58 PM	UV/VIS_2_171117A
1711118-02C	002	Aqueous	E300	Anions by IC method - Water	83219	100	11/14/17 07:01 PM	IC4_171114A
	002	Aqueous	E300	Anions by IC method - Water	83234	1000	11/15/17 01:12 PM	IC4_171115A
	002	Aqueous	E300	Anions by IC method - Water	83234	10	11/15/17 07:43 PM	IC4_171115A
	002	Aqueous	M4500-H+ B	pH	83243	1	11/15/17 11:32 AM	TITRATOR_171115A
1711118-03A	003	Aqueous	SW7470A	Mercury Total: Aqueous	83245	1	11/16/17 03:43 PM	CETAC2_HG_171116B
	003	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	1	11/16/17 11:29 AM	ICP-MS4_171116A
	003	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	100	11/17/17 11:10 AM	ICP-MS4_171117A
	003	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	500	11/20/17 11:15 AM	ICP-MS4_171120B
	003	Aqueous	SW6020A	Uranium in Water by ICPMS	83242	1	11/16/17 11:29 AM	ICP-MS4_171116B
1711118-03B	003	Aqueous	M4500-CN E	Cyanide - Water Sample	83271	1	11/17/17 05:14 PM	UV/VIS_2_171117A
1711118-03C	003	Aqueous	E300	Anions by IC method - Water	83219	100	11/14/17 07:13 PM	IC4_171114A

Lab Order: 1711118
Client: Geo Strata Environmental Consultants
Project: Peeler Ranch

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1711118-03C	003	Aqueous	E300	Anions by IC method - Water	83234	1000	11/15/17 01:24 PM	IC4_171115A
	003	Aqueous	M4500-H+ B	pH	83243	1	11/15/17 11:33 AM	TITRATOR_171115A
1711118-04A	004	Aqueous	SW7470A	Mercury Total: Aqueous	83245	1	11/16/17 03:45 PM	CETAC2_HG_171116B
	004	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	500	11/17/17 11:12 AM	ICP-MS4_171117A
	004	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	100	11/17/17 11:35 AM	ICP-MS4_171117A
	004	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	1	11/16/17 11:31 AM	ICP-MS4_171116A
	004	Aqueous	SW6020A	Uranium in Water by ICPMS	83242	1	11/16/17 11:31 AM	ICP-MS4_171116B
1711118-04B	004	Aqueous	M4500-CN E	Cyanide - Water Sample	83271	1	11/17/17 05:14 PM	UV/VIS_2_171117A
1711118-04C	004	Aqueous	E300	Anions by IC method - Water	83219	100	11/14/17 07:25 PM	IC4_171114A
	004	Aqueous	E300	Anions by IC method - Water	83234	1000	11/15/17 01:36 PM	IC4_171115A
	004	Aqueous	M4500-H+ B	pH	83243	1	11/15/17 11:35 AM	TITRATOR_171115A
1711118-05A	005	Aqueous	SW7470A	Mercury Total: Aqueous	83245	1	11/16/17 03:47 PM	CETAC2_HG_171116B
	005	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	1	11/16/17 12:00 PM	ICP-MS4_171116A
	005	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	100	11/17/17 11:39 AM	ICP-MS4_171117A
	005	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	500	11/17/17 11:37 AM	ICP-MS4_171117A
	005	Aqueous	SW6020A	Uranium in Water by ICPMS	83242	1	11/16/17 12:00 PM	ICP-MS4_171116B
1711118-05B	005	Aqueous	M4500-CN E	Cyanide - Water Sample	83271	1	11/17/17 05:14 PM	UV/VIS_2_171117A
1711118-05C	005	Aqueous	E300	Anions by IC method - Water	83219	100	11/14/17 07:37 PM	IC4_171114A
	005	Aqueous	E300	Anions by IC method - Water	83234	1000	11/15/17 01:48 PM	IC4_171115A
	005	Aqueous	M4500-H+ B	pH	83243	1	11/15/17 11:36 AM	TITRATOR_171115A
1711118-06A	006	Aqueous	SW7470A	Mercury Total: Aqueous	83245	1	11/16/17 03:49 PM	CETAC2_HG_171116B
	006	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	100	11/17/17 11:43 AM	ICP-MS4_171117A
	006	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	1	11/16/17 12:02 PM	ICP-MS4_171116A
	006	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	500	11/17/17 11:41 AM	ICP-MS4_171117A
	006	Aqueous	SW6020A	Uranium in Water by ICPMS	83242	1	11/16/17 12:02 PM	ICP-MS4_171116B
1711118-06B	006	Aqueous	M4500-CN E	Cyanide - Water Sample	83271	1	11/17/17 05:15 PM	UV/VIS_2_171117A

Lab Order: 1711118
Client: Geo Strata Environmental Consultants
Project: Peeler Ranch

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1711118-06C	006	Aqueous	E300	Anions by IC method - Water	83219	100	11/14/17 07:49 PM	IC4_171114A
	006	Aqueous	E300	Anions by IC method - Water	83234	1000	11/15/17 02:00 PM	IC4_171115A
	006	Aqueous	M4500-H+ B	pH	83243	1	11/15/17 11:37 AM	TITRATOR_171115A
1711118-07A	Dup-1	Aqueous	SW7470A	Mercury Total: Aqueous	83245	1	11/16/17 03:52 PM	CETAC2_HG_171116B
	Dup-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	1	11/16/17 12:04 PM	ICP-MS4_171116A
	Dup-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	100	11/17/17 11:47 AM	ICP-MS4_171117A
	Dup-1	Aqueous	SW6020A	Trace Metals: ICP-MS - Water	83242	500	11/17/17 11:45 AM	ICP-MS4_171117A
	Dup-1	Aqueous	SW6020A	Uranium in Water by ICPMS	83242	1	11/16/17 12:04 PM	ICP-MS4_171116B
1711118-07B	Dup-1	Aqueous	M4500-CN E	Cyanide - Water Sample	83271	1	11/17/17 05:15 PM	UV/VIS_2_171117A
1711118-08A	001	Soil	SW9056A	Anions by IC method - Soil	83252	10	11/16/17 03:34 PM	IC2_171116A
	001	Soil	SW9056A	Anions by IC method - Soil	83252	100	11/17/17 11:14 AM	IC2_171117A
	001	Soil	SW9014	Cyanide - Solid Sample	83314	1	11/20/17 04:57 PM	UV/VIS_2_171120D
	001	Soil	D2216	Percent Moisture	83276	1	11/20/17 09:00 AM	PMOIST_171117A
	001	Soil	SW7471B	Total Mercury: Soil/Solid	83266	1	11/20/17 11:03 AM	CETAC2_HG_171120A
	001	Soil	SW6020A	Trace Metals: ICP-MS - Solid	83247	5	11/17/17 04:47 PM	ICP-MS4_171117F
	001	Soil	SW6020A	Trace Metals: ICP-MS - Solid	83247	50	11/20/17 11:21 AM	ICP-MS4_171120B
	001	Soil	SW6020A	Uranium in Soil	83247	5	11/17/17 04:47 PM	ICP-MS4_171117G
	002	Soil	SW9056A	Anions by IC method - Soil	83252	10	11/16/17 04:30 PM	IC2_171116A
	002	Soil	SW9056A	Anions by IC method - Soil	83252	1	11/17/17 12:37 PM	IC2_171117A
1711118-09A	002	Soil	SW7471B	Total Mercury: Soil/Solid	83266	1	11/20/17 11:14 AM	CETAC2_HG_171120A
	002	Soil	SW6020A	Trace Metals: ICP-MS - Solid	83247	5	11/17/17 04:49 PM	ICP-MS4_171117F
	002	Soil	SW6020A	Trace Metals: ICP-MS - Solid	83247	100	11/20/17 11:23 AM	ICP-MS4_171120B
	002	Soil	SW6020A	Uranium in Soil	83247	5	11/17/17 04:49 PM	ICP-MS4_171117G
	002	Soil	SW9014	Cyanide - Solid Sample	83314	1	11/20/17 04:57 PM	UV/VIS_2_171120D
	002	Soil	D2216	Percent Moisture	83276	1	11/20/17 09:00 AM	PMOIST_171117A

DHL Analytical, Inc.

Date: 22-Nov-17

CLIENT: Geo Strata Environmental Consultants
Project: Peeler Ranch
Project No: 975 SA-Other
Lab Order: 1711118

Client Sample ID: 001
Lab ID: 1711118-01
Collection Date: 11/13/17 11:45 AM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Aluminum	2.53	0.0100	0.0300		mg/L	1	11/16/17 11:25 AM
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/16/17 11:25 AM
Arsenic	0.0244	0.00200	0.00500		mg/L	1	11/16/17 11:25 AM
Barium	0.0600	0.00300	0.0100		mg/L	1	11/16/17 11:25 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/16/17 11:25 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/16/17 11:25 AM
Calcium	543	10.0	30.0		mg/L	100	11/17/17 11:06 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/16/17 11:25 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/16/17 11:25 AM
Copper	0.00253	0.00200	0.0100	J	mg/L	1	11/16/17 11:25 AM
Iron	1.08	0.0300	0.100		mg/L	1	11/16/17 11:25 AM
Lead	0.00173	0.000300	0.00100		mg/L	1	11/16/17 11:25 AM
Magnesium	38.3	10.0	30.0		mg/L	100	11/17/17 11:06 AM
Manganese	0.0907	0.00300	0.0100		mg/L	1	11/16/17 11:25 AM
Molybdenum	0.0157	0.00200	0.00500		mg/L	1	11/16/17 11:25 AM
Nickel	<0.00300	0.00300	0.0100		mg/L	1	11/16/17 11:25 AM
Potassium	23.7	0.100	0.300		mg/L	1	11/16/17 11:25 AM
Selenium	0.00288	0.00200	0.00500	J	mg/L	1	11/16/17 11:25 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	11/16/17 11:25 AM
Sodium	1510	10.0	30.0		mg/L	100	11/17/17 11:06 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/16/17 11:25 AM
Vanadium	0.0109	0.000500	0.00100		mg/L	1	11/16/17 11:25 AM
Zinc	0.00708	0.00200	0.00500		mg/L	1	11/16/17 11:25 AM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/16/17 03:29 PM
URANIUM IN WATER BY ICPMS		SW6020A		Analyst: RO			
Uranium	0.0405	0.00300	0.0100	N	mg/L	1	11/16/17 11:25 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: JL			
Bromide	6.46	0.300	1.00		mg/L	1	11/16/17 05:06 PM
Chloride	1180	30.0	100		mg/L	100	11/14/17 06:49 PM
Sulfate	3090	100	300		mg/L	100	11/14/17 06:49 PM
CYANIDE - WATER SAMPLE		M4500-CN E		Analyst: VA			
Cyanide, Amenable to Chlorination	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 01:57 PM
Cyanide, Total	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 01:57 PM
PH		M4500-H+ B		Analyst: BTJ			
pH	8.37	0	0		pH Units@17.5°C	1	11/15/17 11:30 AM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAC certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 22-Nov-17

CLIENT: Geo Strata Environmental Consultants
Project: Peeler Ranch
Project No: 975 SA-Other
Lab Order: 1711118

Client Sample ID: 002
Lab ID: 1711118-02
Collection Date: 11/13/17 12:30 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Aluminum	0.280	0.0100	0.0300		mg/L	1	11/16/17 11:27 AM
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/16/17 11:27 AM
Arsenic	0.0173	0.00200	0.00500		mg/L	1	11/16/17 11:27 AM
Barium	0.0554	0.00300	0.0100		mg/L	1	11/16/17 11:27 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/16/17 11:27 AM
Cadmium	0.000389	0.000300	0.00100	J	mg/L	1	11/16/17 11:27 AM
Calcium	931	10.0	30.0		mg/L	100	11/17/17 11:08 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/16/17 11:27 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/16/17 11:27 AM
Copper	<0.00200	0.00200	0.0100		mg/L	1	11/16/17 11:27 AM
Iron	0.159	0.0300	0.100		mg/L	1	11/16/17 11:27 AM
Lead	0.000398	0.000300	0.00100	J	mg/L	1	11/16/17 11:27 AM
Magnesium	77.2	10.0	30.0		mg/L	100	11/17/17 11:08 AM
Manganese	0.398	0.00300	0.0100		mg/L	1	11/16/17 11:27 AM
Molybdenum	0.00597	0.00200	0.00500		mg/L	1	11/16/17 11:27 AM
Nickel	0.00435	0.00300	0.0100	J	mg/L	1	11/16/17 11:27 AM
Potassium	80.4	10.0	30.0		mg/L	100	11/17/17 11:08 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/16/17 11:27 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	11/16/17 11:27 AM
Sodium	3940	50.0	150		mg/L	500	11/20/17 11:13 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/16/17 11:27 AM
Vanadium	0.000827	0.000500	0.00100	J	mg/L	1	11/16/17 11:27 AM
Zinc	0.0147	0.00200	0.00500		mg/L	1	11/16/17 11:27 AM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/16/17 03:40 PM
URANIUM IN WATER BY ICPMS		SW6020A		Analyst: RO			
Uranium	0.0263	0.00300	0.0100	N	mg/L	1	11/16/17 11:27 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: JL			
Bromide	11.1	3.00	10.0		mg/L	10	11/15/17 07:43 PM
Chloride	5420	300	1000		mg/L	1000	11/15/17 01:12 PM
Sulfate	3270	100	300		mg/L	100	11/14/17 07:01 PM
CYANIDE - WATER SAMPLE		M4500-CN E		Analyst: VA			
Cyanide, Amenable to Chlorination	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 01:58 PM
Cyanide, Total	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 01:58 PM
PH		M4500-H+ B		Analyst: BTJ			
pH	7.81	0	0		pH Units@17.5°C	1	11/15/17 11:32 AM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAC certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: 22-Nov-17

CLIENT: Geo Strata Environmental Consultants
Project: Peeler Ranch
Project No: 975 SA-Other
Lab Order: 1711118

Client Sample ID: 003
Lab ID: 1711118-03
Collection Date: 11/13/17 01:00 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Aluminum	4.90	0.0100	0.0300		mg/L	1	11/16/17 11:29 AM
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/16/17 11:29 AM
Arsenic	0.0206	0.00200	0.00500		mg/L	1	11/16/17 11:29 AM
Barium	0.208	0.00300	0.0100		mg/L	1	11/16/17 11:29 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/16/17 11:29 AM
Cadmium	0.000549	0.000300	0.00100	J	mg/L	1	11/16/17 11:29 AM
Calcium	1700	10.0	30.0		mg/L	100	11/17/17 11:10 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/16/17 11:29 AM
Cobalt	0.00335	0.00300	0.00500	J	mg/L	1	11/16/17 11:29 AM
Copper	0.00219	0.00200	0.0100	J	mg/L	1	11/16/17 11:29 AM
Iron	2.46	0.0300	0.100		mg/L	1	11/16/17 11:29 AM
Lead	0.00388	0.000300	0.00100		mg/L	1	11/16/17 11:29 AM
Magnesium	123	10.0	30.0		mg/L	100	11/17/17 11:10 AM
Manganese	4.05	0.300	1.00		mg/L	100	11/17/17 11:10 AM
Molybdenum	0.00543	0.00200	0.00500		mg/L	1	11/16/17 11:29 AM
Nickel	0.00354	0.00300	0.0100	J	mg/L	1	11/16/17 11:29 AM
Potassium	87.1	10.0	30.0		mg/L	100	11/17/17 11:10 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/16/17 11:29 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	11/16/17 11:29 AM
Sodium	5080	50.0	150		mg/L	500	11/20/17 11:15 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/16/17 11:29 AM
Vanadium	0.00665	0.000500	0.00100		mg/L	1	11/16/17 11:29 AM
Zinc	0.0464	0.00200	0.00500		mg/L	1	11/16/17 11:29 AM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/16/17 03:43 PM
URANIUM IN WATER BY ICPMS		SW6020A		Analyst: RO			
Uranium	0.0549	0.00300	0.0100	N	mg/L	1	11/16/17 11:29 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: JL			
Bromide	154	30.0	100		mg/L	100	11/14/17 07:13 PM
Chloride	9590	300	1000		mg/L	1000	11/15/17 01:24 PM
Sulfate	1970	100	300		mg/L	100	11/14/17 07:13 PM
CYANIDE - WATER SAMPLE		M4500-CN E		Analyst: VA			
Cyanide, Amenable to Chlorination	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 05:14 PM
Cyanide, Total	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 05:14 PM
PH		M4500-H+ B		Analyst: BTJ			
pH	8.46	0	0		pH Units@17.5°C	1	11/15/17 11:33 AM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAC certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 22-Nov-17

CLIENT: Geo Strata Environmental Consultants
Project: Peeler Ranch
Project No: 975 SA-Other
Lab Order: 1711118

Client Sample ID: 004
Lab ID: 1711118-04
Collection Date: 11/13/17 01:10 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Aluminum	0.227	0.0100	0.0300		mg/L	1	11/16/17 11:31 AM
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/16/17 11:31 AM
Arsenic	0.00986	0.00200	0.00500		mg/L	1	11/16/17 11:31 AM
Barium	0.0408	0.00300	0.0100		mg/L	1	11/16/17 11:31 AM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/16/17 11:31 AM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/16/17 11:31 AM
Calcium	1050	10.0	30.0		mg/L	100	11/17/17 11:35 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/16/17 11:31 AM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/16/17 11:31 AM
Copper	<0.00200	0.00200	0.0100		mg/L	1	11/16/17 11:31 AM
Iron	0.900	0.0300	0.100		mg/L	1	11/16/17 11:31 AM
Lead	0.000309	0.000300	0.00100	J	mg/L	1	11/16/17 11:31 AM
Magnesium	77.6	10.0	30.0		mg/L	100	11/17/17 11:35 AM
Manganese	0.931	0.00300	0.0100		mg/L	1	11/16/17 11:31 AM
Molybdenum	0.00469	0.00200	0.00500	J	mg/L	1	11/16/17 11:31 AM
Nickel	0.00308	0.00300	0.0100	J	mg/L	1	11/16/17 11:31 AM
Potassium	82.8	10.0	30.0		mg/L	100	11/17/17 11:35 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/16/17 11:31 AM
Silver	<0.00100	0.00100	0.00200		mg/L	1	11/16/17 11:31 AM
Sodium	3640	50.0	150		mg/L	500	11/17/17 11:12 AM
Thallium	0.00122	0.000500	0.00150	J	mg/L	1	11/16/17 11:31 AM
Vanadium	0.000868	0.000500	0.00100	J	mg/L	1	11/16/17 11:31 AM
Zinc	0.00670	0.00200	0.00500		mg/L	1	11/16/17 11:31 AM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/16/17 03:45 PM
URANIUM IN WATER BY ICPMS		SW6020A		Analyst: RO			
Uranium	0.0417	0.00300	0.0100	N	mg/L	1	11/16/17 11:31 AM
ANIONS BY IC METHOD - WATER		E300		Analyst: JL			
Bromide	133	30.0	100		mg/L	100	11/14/17 07:25 PM
Chloride	5740	300	1000		mg/L	1000	11/15/17 01:36 PM
Sulfate	2240	100	300		mg/L	100	11/14/17 07:25 PM
CYANIDE - WATER SAMPLE		M4500-CN E		Analyst: VA			
Cyanide, Amenable to Chlorination	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 05:14 PM
Cyanide, Total	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 05:14 PM
PH		M4500-H+ B		Analyst: BTJ			
pH	7.62	0	0		pH Units@17.5°C	1	11/15/17 11:35 AM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAC certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 22-Nov-17

CLIENT: Geo Strata Environmental Consultants
Project: Peeler Ranch
Project No: 975 SA-Other
Lab Order: 1711118

Client Sample ID: 005
Lab ID: 1711118-05
Collection Date: 11/13/17 01:30 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Aluminum	0.545	0.0100	0.0300		mg/L	1	11/16/17 12:00 PM
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/16/17 12:00 PM
Arsenic	0.0742	0.00200	0.00500		mg/L	1	11/16/17 12:00 PM
Barium	0.0486	0.00300	0.0100		mg/L	1	11/16/17 12:00 PM
Beryllium	0.000335	0.000300	0.00100	J	mg/L	1	11/16/17 12:00 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/16/17 12:00 PM
Calcium	990	10.0	30.0		mg/L	100	11/17/17 11:39 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/16/17 12:00 PM
Cobalt	0.00350	0.00300	0.00500	J	mg/L	1	11/16/17 12:00 PM
Copper	<0.00200	0.00200	0.0100		mg/L	1	11/16/17 12:00 PM
Iron	8.47	0.0300	0.100		mg/L	1	11/16/17 12:00 PM
Lead	0.000677	0.000300	0.00100	J	mg/L	1	11/16/17 12:00 PM
Magnesium	90.1	10.0	30.0		mg/L	100	11/17/17 11:39 AM
Manganese	6.79	0.300	1.00		mg/L	100	11/17/17 11:39 AM
Molybdenum	0.0294	0.00200	0.00500		mg/L	1	11/16/17 12:00 PM
Nickel	0.00617	0.00300	0.0100	J	mg/L	1	11/16/17 12:00 PM
Potassium	81.3	10.0	30.0		mg/L	100	11/17/17 11:39 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/16/17 12:00 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	11/16/17 12:00 PM
Sodium	4160	50.0	150		mg/L	500	11/17/17 11:37 AM
Thallium	0.000666	0.000500	0.00150	J	mg/L	1	11/16/17 12:00 PM
Vanadium	0.000540	0.000500	0.00100	J	mg/L	1	11/16/17 12:00 PM
Zinc	0.0487	0.00200	0.00500		mg/L	1	11/16/17 12:00 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/16/17 03:47 PM
URANIUM IN WATER BY ICPMS		SW6020A		Analyst: RO			
Uranium	0.00858	0.00300	0.0100	JN	mg/L	1	11/16/17 12:00 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JL			
Bromide	119	30.0	100		mg/L	100	11/14/17 07:37 PM
Chloride	5350	300	1000		mg/L	1000	11/15/17 01:48 PM
Sulfate	2830	100	300		mg/L	100	11/14/17 07:37 PM
CYANIDE - WATER SAMPLE		M4500-CN E		Analyst: VA			
Cyanide, Amenable to Chlorination	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 05:14 PM
Cyanide, Total	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 05:14 PM
PH		M4500-H+ B		Analyst: BTJ			
pH	6.48	0	0		pH Units@17.7°C	1	11/15/17 11:36 AM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAC certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 22-Nov-17

CLIENT: Geo Strata Environmental Consultants
Project: Peeler Ranch
Project No: 975 SA-Other
Lab Order: 1711118

Client Sample ID: 006
Lab ID: 1711118-06
Collection Date: 11/13/17 01:37 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Aluminum	0.467	0.0100	0.0300		mg/L	1	11/16/17 12:02 PM
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/16/17 12:02 PM
Arsenic	0.0279	0.00200	0.00500		mg/L	1	11/16/17 12:02 PM
Barium	0.0537	0.00300	0.0100		mg/L	1	11/16/17 12:02 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/16/17 12:02 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/16/17 12:02 PM
Calcium	878	10.0	30.0		mg/L	100	11/17/17 11:43 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/16/17 12:02 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/16/17 12:02 PM
Copper	<0.00200	0.00200	0.0100		mg/L	1	11/16/17 12:02 PM
Iron	0.389	0.0300	0.100		mg/L	1	11/16/17 12:02 PM
Lead	0.000499	0.000300	0.00100	J	mg/L	1	11/16/17 12:02 PM
Magnesium	75.5	10.0	30.0		mg/L	100	11/17/17 11:43 AM
Manganese	1.11	0.00300	0.0100		mg/L	1	11/16/17 12:02 PM
Molybdenum	0.00742	0.00200	0.00500		mg/L	1	11/16/17 12:02 PM
Nickel	<0.00300	0.00300	0.0100		mg/L	1	11/16/17 12:02 PM
Potassium	80.0	10.0	30.0		mg/L	100	11/17/17 11:43 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/16/17 12:02 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	11/16/17 12:02 PM
Sodium	4530	50.0	150		mg/L	500	11/17/17 11:41 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/16/17 12:02 PM
Vanadium	0.000980	0.000500	0.00100	J	mg/L	1	11/16/17 12:02 PM
Zinc	0.00312	0.00200	0.00500	J	mg/L	1	11/16/17 12:02 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/16/17 03:49 PM
URANIUM IN WATER BY ICPMS		SW6020A		Analyst: RO			
Uranium	0.0252	0.00300	0.0100	N	mg/L	1	11/16/17 12:02 PM
ANIONS BY IC METHOD - WATER		E300		Analyst: JL			
Bromide	136	30.0	100		mg/L	100	11/14/17 07:49 PM
Chloride	6070	300	1000		mg/L	1000	11/15/17 02:00 PM
Sulfate	3170	100	300		mg/L	100	11/14/17 07:49 PM
CYANIDE - WATER SAMPLE		M4500-CN E		Analyst: VA			
Cyanide, Amenable to Chlorination	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 05:15 PM
Cyanide, Total	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 05:15 PM
PH		M4500-H+ B		Analyst: BTJ			
pH	7.65	0	0		pH Units@18.5°C	1	11/15/17 11:37 AM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAC certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 22-Nov-17

CLIENT: Geo Strata Environmental Consultants
Project: Peeler Ranch
Project No: 975 SA-Other
Lab Order: 1711118

Client Sample ID: Dup-1
Lab ID: 1711118-07
Collection Date: 11/13/17 01:55 PM
Matrix: AQUEOUS

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - WATER		SW6020A		Analyst: RO			
Aluminum	0.195	0.0100	0.0300		mg/L	1	11/16/17 12:04 PM
Antimony	<0.000800	0.000800	0.00250		mg/L	1	11/16/17 12:04 PM
Arsenic	0.0245	0.00200	0.00500		mg/L	1	11/16/17 12:04 PM
Barium	0.0504	0.00300	0.0100		mg/L	1	11/16/17 12:04 PM
Beryllium	<0.000300	0.000300	0.00100		mg/L	1	11/16/17 12:04 PM
Cadmium	<0.000300	0.000300	0.00100		mg/L	1	11/16/17 12:04 PM
Calcium	968	10.0	30.0		mg/L	100	11/17/17 11:47 AM
Chromium	<0.00200	0.00200	0.00500		mg/L	1	11/16/17 12:04 PM
Cobalt	<0.00300	0.00300	0.00500		mg/L	1	11/16/17 12:04 PM
Copper	<0.00200	0.00200	0.0100		mg/L	1	11/16/17 12:04 PM
Iron	0.202	0.0300	0.100		mg/L	1	11/16/17 12:04 PM
Lead	<0.000300	0.000300	0.00100		mg/L	1	11/16/17 12:04 PM
Magnesium	83.8	10.0	30.0		mg/L	100	11/17/17 11:47 AM
Manganese	0.895	0.00300	0.0100		mg/L	1	11/16/17 12:04 PM
Molybdenum	0.00744	0.00200	0.00500		mg/L	1	11/16/17 12:04 PM
Nickel	<0.00300	0.00300	0.0100		mg/L	1	11/16/17 12:04 PM
Potassium	87.6	10.0	30.0		mg/L	100	11/17/17 11:47 AM
Selenium	<0.00200	0.00200	0.00500		mg/L	1	11/16/17 12:04 PM
Silver	<0.00100	0.00100	0.00200		mg/L	1	11/16/17 12:04 PM
Sodium	4600	50.0	150		mg/L	500	11/17/17 11:45 AM
Thallium	<0.000500	0.000500	0.00150		mg/L	1	11/16/17 12:04 PM
Vanadium	0.000794	0.000500	0.00100	J	mg/L	1	11/16/17 12:04 PM
Zinc	0.00292	0.00200	0.00500	J	mg/L	1	11/16/17 12:04 PM
MERCURY TOTAL: AQUEOUS		SW7470A		Analyst: AH			
Mercury	<0.0000800	0.0000800	0.000200		mg/L	1	11/16/17 03:52 PM
URANIUM IN WATER BY ICPMS		SW6020A		Analyst: RO			
Uranium	0.0248	0.00300	0.0100	N	mg/L	1	11/16/17 12:04 PM
CYANIDE - WATER SAMPLE		M4500-CN E		Analyst: VA			
Cyanide, Amenable to Chlorination	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 05:15 PM
Cyanide, Total	<0.0100	0.0100	0.0200		mg/L	1	11/17/17 05:15 PM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAC certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.

Date: 22-Nov-17

CLIENT: Geo Strata Environmental Consultants
Project: Peeler Ranch
Project No: 975 SA-Other
Lab Order: 1711118

Client Sample ID: 001
Lab ID: 1711118-08
Collection Date: 11/13/17 11:45 AM
Matrix: SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - SOLID		SW6020A		Analyst: RO			
Aluminum	21800	155	465		mg/Kg-dry	50	11/20/17 11:21 AM
Antimony	<0.620	0.620	1.24		mg/Kg-dry	5	11/17/17 04:47 PM
Arsenic	7.38	0.620	1.24		mg/Kg-dry	5	11/17/17 04:47 PM
Barium	183	0.620	2.48		mg/Kg-dry	5	11/17/17 04:47 PM
Beryllium	0.915	0.124	0.372		mg/Kg-dry	5	11/17/17 04:47 PM
Cadmium	0.178	0.124	0.372	J	mg/Kg-dry	5	11/17/17 04:47 PM
Calcium	5890	15.5	46.5		mg/Kg-dry	5	11/17/17 04:47 PM
Chromium	6.36	0.620	2.48		mg/Kg-dry	5	11/17/17 04:47 PM
Cobalt	3.31	0.620	2.48		mg/Kg-dry	5	11/17/17 04:47 PM
Copper	3.95	0.620	2.48		mg/Kg-dry	5	11/17/17 04:47 PM
Iron	10600	155	465		mg/Kg-dry	50	11/20/17 11:21 AM
Lead	12.0	0.124	0.372		mg/Kg-dry	5	11/17/17 04:47 PM
Magnesium	3990	15.5	46.5		mg/Kg-dry	5	11/17/17 04:47 PM
Manganese	197	0.620	2.48		mg/Kg-dry	5	11/17/17 04:47 PM
Molybdenum	1.26	0.620	2.48	J	mg/Kg-dry	5	11/17/17 04:47 PM
Nickel	4.02	0.620	2.48		mg/Kg-dry	5	11/17/17 04:47 PM
Potassium	2290	15.5	46.5		mg/Kg-dry	5	11/17/17 04:47 PM
Selenium	2.49	0.186	0.620		mg/Kg-dry	5	11/17/17 04:47 PM
Silver	<0.124	0.124	0.248		mg/Kg-dry	5	11/17/17 04:47 PM
Sodium	20300	155	465		mg/Kg-dry	50	11/20/17 11:21 AM
Thallium	<0.620	0.620	1.24		mg/Kg-dry	5	11/17/17 04:47 PM
Vanadium	18.1	1.24	3.10		mg/Kg-dry	5	11/17/17 04:47 PM
Zinc	35.3	1.24	3.10		mg/Kg-dry	5	11/17/17 04:47 PM
TOTAL MERCURY: SOIL/SOLID		SW7471B		Analyst: RO			
Mercury	<0.0198	0.0198	0.0494		mg/Kg-dry	1	11/20/17 11:03 AM
URANIUM IN SOIL		SW6020A		Analyst: RO			
Uranium	2.32	1.24	3.10	JN	mg/Kg-dry	5	11/17/17 04:47 PM
ANIONS BY IC METHOD - SOIL		SW9056A		Analyst: JL			
Bromide	77.9	24.9	62.2		mg/Kg-dry	10	11/16/17 03:34 PM
Chloride	19300	249	622		mg/Kg-dry	100	11/17/17 11:14 AM
Sulfate	5010	37.3	124		mg/Kg-dry	10	11/16/17 03:34 PM
CYANIDE - SOLID SAMPLE		SW9014		Analyst: VA			
Cyanide, Amenable to Chlorination	<0.212	0.212	0.531		mg/Kg-dry	1	11/20/17 04:57 PM
Cyanide, Total	<0.212	0.212	0.531		mg/Kg-dry	1	11/20/17 04:57 PM
PERCENT MOISTURE		D2216		Analyst: JW			
Percent Moisture	22.5	0	0		WT%	1	11/20/17 09:00 AM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAC certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

DHL Analytical, Inc.**Date:** 22-Nov-17

CLIENT: Geo Strata Environmental Consultants
Project: Peeler Ranch
Project No: 975 SA-Other
Lab Order: 1711118

Client Sample ID: 002
Lab ID: 1711118-09
Collection Date: 11/13/17 02:30 PM
Matrix: SOIL

Analyses	Result	SDL	RL	Qual	Units	DF	Date Analyzed
TRACE METALS: ICP-MS - SOLID		SW6020A		Analyst: RO			
Aluminum	7570	279	836		mg/Kg-dry	100	11/20/17 11:23 AM
Antimony	<0.557	0.557	1.11		mg/Kg-dry	5	11/17/17 04:49 PM
Arsenic	10.9	0.557	1.11		mg/Kg-dry	5	11/17/17 04:49 PM
Barium	74.3	0.557	2.23		mg/Kg-dry	5	11/17/17 04:49 PM
Beryllium	1.43	0.111	0.334		mg/Kg-dry	5	11/17/17 04:49 PM
Cadmium	0.332	0.111	0.334	J	mg/Kg-dry	5	11/17/17 04:49 PM
Calcium	76300	279	836		mg/Kg-dry	100	11/20/17 11:23 AM
Chromium	6.56	0.557	2.23		mg/Kg-dry	5	11/17/17 04:49 PM
Cobalt	1.34	0.557	2.23	J	mg/Kg-dry	5	11/17/17 04:49 PM
Copper	4.65	0.557	2.23		mg/Kg-dry	5	11/17/17 04:49 PM
Iron	5770	279	836		mg/Kg-dry	100	11/20/17 11:23 AM
Lead	5.99	0.111	0.334		mg/Kg-dry	5	11/17/17 04:49 PM
Magnesium	692	13.9	41.8		mg/Kg-dry	5	11/17/17 04:49 PM
Manganese	94.2	0.557	2.23		mg/Kg-dry	5	11/17/17 04:49 PM
Molybdenum	2.97	0.557	2.23		mg/Kg-dry	5	11/17/17 04:49 PM
Nickel	2.73	0.557	2.23		mg/Kg-dry	5	11/17/17 04:49 PM
Potassium	726	13.9	41.8		mg/Kg-dry	5	11/17/17 04:49 PM
Selenium	7.85	0.167	0.557		mg/Kg-dry	5	11/17/17 04:49 PM
Silver	<0.111	0.111	0.223		mg/Kg-dry	5	11/17/17 04:49 PM
Sodium	1790	13.9	41.8		mg/Kg-dry	5	11/17/17 04:49 PM
Thallium	<0.557	0.557	1.11		mg/Kg-dry	5	11/17/17 04:49 PM
Vanadium	21.2	1.11	2.79		mg/Kg-dry	5	11/17/17 04:49 PM
Zinc	19.6	1.11	2.79		mg/Kg-dry	5	11/17/17 04:49 PM
TOTAL MERCURY: SOIL/SOLID		SW7471B		Analyst: RO			
Mercury	0.235	0.0166	0.0414		mg/Kg-dry	1	11/20/17 11:14 AM
URANIUM IN SOIL		SW6020A		Analyst: RO			
Uranium	2.13	1.11	2.79	JN	mg/Kg-dry	5	11/17/17 04:49 PM
ANIONS BY IC METHOD - SOIL		SW9056A		Analyst: JL			
Bromide	<2.24	2.24	5.60		mg/Kg-dry	1	11/17/17 12:37 PM
Chloride	379	22.4	56.0		mg/Kg-dry	10	11/16/17 04:30 PM
Sulfate	8120	33.6	112		mg/Kg-dry	10	11/16/17 04:30 PM
CYANIDE - SOLID SAMPLE		SW9014		Analyst: VA			
Cyanide, Amenable to Chlorination	<0.195	0.195	0.487		mg/Kg-dry	1	11/20/17 04:57 PM
Cyanide, Total	<0.195	0.195	0.487		mg/Kg-dry	1	11/20/17 04:57 PM
PERCENT MOISTURE		D2216		Analyst: JW			
Percent Moisture	13.7	0	0		WT%	1	11/20/17 09:00 AM

Qualifiers: ND - Not Detected at the SDL
J - Analyte detected between SDL and RL
B - Analyte detected in the associated Method Blank
DF- Dilution Factor
N - Parameter not NELAC certified
See Final Page of Report for MQLs and MDLs

S - Spike Recovery outside control limits
C - Sample Result or QC discussed in Case Narrative
RL - Reporting Limit (MQL adjusted for moisture and sample size)
SDL - Sample Detection Limit
E - TPH pattern not Gas or Diesel Range Pattern

CLIENT: Geo Strata Environmental Consultants

Work Order: 1711118

Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_171004A

Sample ID	DCS-82639	Batch ID:	82639	TestNo:	SW7470A	Units:	mg/L			
SampType:	DCS	Run ID:	CETAC2_HG_171004A	Analysis Date:	10/4/2017 9:09:57 AM	Prep Date:	10/3/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Mercury		0.000186	0.000200	0.000200	0	93.0	82	119	0	0

Qualifiers:

B Analyte detected in the associated Method Blank

J Analyte detected between MDL and RL

ND Not Detected at the Method Detection Limit

RL Reporting Limit

J Analyte detected between SDL and RL

DF Dilution Factor

MDL Method Detection Limit

R RPD outside accepted control limits

S Spike Recovery outside control limits

N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_171031C

Sample ID	DCS-83026	Batch ID:	83026	TestNo:	SW7471B	Units:	mg/Kg			
SampType:	DCS	Run ID:	CETAC2_HG_171031	Analysis Date:	10/31/2017 1:02:44 PM	Prep Date:	10/31/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Mercury		0.0447	0.0400	0.04000	0	112	80	124	0	0

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_171116B

The QC data in batch 83245 applies to the following samples: 1711118-01A, 1711118-02A, 1711118-03A, 1711118-04A, 1711118-05A, 1711118-06A, 1711118-07A

Sample ID	MB-83245	Batch ID:	83245	TestNo:	SW7470A	Units:	mg/L			
SampType:	MBLK	Run ID:	CETAC2_HG_171116	Analysis Date:	11/16/2017 3:22:41 PM	Prep Date:	11/16/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury <0.0000800 0.000200

Sample ID	LCS-83245	Batch ID:	83245	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCS	Run ID:	CETAC2_HG_171116	Analysis Date:	11/16/2017 3:24:56 PM	Prep Date:	11/16/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00201 0.000200 0.00200 0 101 85 115

Sample ID	LCSD-83245	Batch ID:	83245	TestNo:	SW7470A	Units:	mg/L			
SampType:	LCSD	Run ID:	CETAC2_HG_171116	Analysis Date:	11/16/2017 3:27:12 PM	Prep Date:	11/16/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00203 0.000200 0.00200 0 102 85 115 0.990 15

Sample ID	1711118-01A SD	Batch ID:	83245	TestNo:	SW7470A	Units:	mg/L			
SampType:	SD	Run ID:	CETAC2_HG_171116	Analysis Date:	11/16/2017 3:31:44 PM	Prep Date:	11/16/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury <0.000400 0.00100 0 0 0 0 10

Sample ID	1711118-01A PDS	Batch ID:	83245	TestNo:	SW7470A	Units:	mg/L			
SampType:	PDS	Run ID:	CETAC2_HG_171116	Analysis Date:	11/16/2017 3:34:00 PM	Prep Date:	11/16/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00236 0.000200 0.00250 0 94.4 85 115

Sample ID	1711118-01A MS	Batch ID:	83245	TestNo:	SW7470A	Units:	mg/L			
SampType:	MS	Run ID:	CETAC2_HG_171116	Analysis Date:	11/16/2017 3:36:16 PM	Prep Date:	11/16/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00190 0.000200 0.00200 0 95.0 80 120

Sample ID	1711118-01A MSD	Batch ID:	83245	TestNo:	SW7470A	Units:	mg/L			
SampType:	MSD	Run ID:	CETAC2_HG_171116	Analysis Date:	11/16/2017 3:38:32 PM	Prep Date:	11/16/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Mercury 0.00189 0.000200 0.00200 0 94.5 80 120 0.528 15

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_171116B

Sample ID	ICV-171116	Batch ID:	R95193	TestNo:	SW7470A	Units:	mg/L			
SampType:	ICV	Run ID:	CETAC2_HG_171116	Analysis Date:	11/16/2017 2:50:51 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00399	0.000200	0.00400	0	99.8	90	110			

Sample ID	CCV1-171116	Batch ID:	R95193	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_171116	Analysis Date:	11/16/2017 3:18:06 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00203	0.000200	0.00200	0	102	90	110			

Sample ID	CCV2-171116	Batch ID:	R95193	TestNo:	SW7470A	Units:	mg/L			
SampType:	CCV	Run ID:	CETAC2_HG_171116	Analysis Date:	11/16/2017 4:01:17 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00205	0.000200	0.00200	0	103	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_171120A

The QC data in batch 83266 applies to the following samples: 1711118-08A, 1711118-09A

Sample ID	MB-83266		Batch ID:	83266		TestNo:	SW7471B		Units:	mg/Kg	
SampType:	MBLK		Run ID:	CETAC2_HG_171120A		Analysis Date:	11/20/2017 10:49:28 A		Prep Date:	11/16/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	<0.0160	0.0400								
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Sample ID	LCS-83266			Batch ID:	83266		TestNo:	SW7471B		Units:	mg/Kg	
SampType:	LCS			Run ID:	CETAC2_HG_171120A		Analysis Date:	11/20/2017 10:51:44 A		Prep Date:	11/16/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Mercury	0.219	0.0400	0.2000	0	110	85	115			
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Sample ID	LCSD-83266			Batch ID:	83266		TestNo:	SW7471B		Units:	mg/Kg	
SampType:	LCSD			Run ID:	CETAC2_HG_171120A		Analysis Date:	11/20/2017 10:54:00 A		Prep Date:	11/16/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Mercury	0.219	0.0400	0.2000	0	110	85	115	0	25	
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Sample ID	1711118-08A SD	Batch ID:	83266	TestNo:	SW7471B	Units:	mg/Kg-dry			
SampType:	SD	Run ID:	CETAC2_HG_171120A	Analysis Date:	11/20/2017 11:05:20 A	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	<0.0989	0.247	0	0				0	10	
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Sample ID	1711118-08A PDS	Batch ID:	83266	TestNo:	SW7471B	Units:	mg/Kg-dry			
SampType:	PDS	Run ID:	CETAC2_HG_171120A	Analysis Date:	11/20/2017 11:07:36 A	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.326	0.0494	0.3089	0	106	85	115			
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Sample ID	1711118-08A MS	Batch ID:	83266	TestNo:	SW7471B	Units:	mg/Kg-dry			
SampType:	MS	Run ID:	CETAC2_HG_171120A	Analysis Date:	11/20/2017 11:09:52 A	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.270	0.0478	0.2392	0	113	80	120			
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Sample ID	1711118-08A MSD	Batch ID:	83266	TestNo:	SW7471B	Units:	mg/Kg-dry			
SampType:	MSD	Run ID:	CETAC2_HG_171120A	Analysis Date:	11/20/2017 11:12:08 A	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Mercury	0.273	0.0484	0.2420	0	113	80	120	1.17	25	
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Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC2_HG_171120A

Sample ID	ICV-171120	Batch ID:	R95230	TestNo:	SW7471B	Units:	mg/Kg			
SampType:	ICV	Run ID:	CETAC2_HG_171120A	Analysis Date:	11/20/2017 10:44:54 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00402	0.0400	0.004000	0	101	90	110			

Sample ID	CCV1-171120	Batch ID:	R95230	TestNo:	SW7471B	Units:	mg/Kg			
SampType:	CCV	Run ID:	CETAC2_HG_171120A	Analysis Date:	11/20/2017 11:21:13 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00207	0.0400	0.002000	0	104	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171031A

Sample ID	DCS1-83002	Batch ID:	83002	TestNo:	SW6020A	Units:	mg/Kg
SampType:	DCS	Run ID:	ICP-MS4_171031A	Analysis Date:	10/31/2017 11:25:00 A	Prep Date:	10/30/2017

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	39.3	37.5	37.50	0	105	80	120	0	0	
Beryllium	0.210	0.300	0.2500	0	84.0	80	120	0	0	
Cadmium	0.245	0.300	0.2500	0	98.1	80	120	0	0	
Calcium	48.4	37.5	37.50	0	129	80	120	0	0	S
Iron	39.1	37.5	37.50	0	104	80	120	0	0	
Lead	0.263	0.300	0.2500	0	105	80	120	0	0	
Magnesium	39.3	37.5	37.50	0	105	80	120	0	0	
Potassium	37.9	37.5	37.50	0	101	80	120	0	0	
Selenium	0.278	0.500	0.2500	0	111	80	120	0	0	
Silver	0.265	0.200	0.2500	0	106	80	120	0	0	
Sodium	38.8	37.5	37.50	0	103	80	120	0	0	

Sample ID	DCS2-83002	Batch ID:	83002	TestNo:	SW6020A	Units:	mg/Kg
SampType:	DCS2	Run ID:	ICP-MS4_171031A	Analysis Date:	10/31/2017 11:27:00 A	Prep Date:	10/30/2017

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	1.27	1.00	1.250	0	101	80	120	0	0	
Arsenic	1.34	1.00	1.250	0	107	80	120	0	0	
Barium	1.26	2.00	1.250	0	101	80	120	0	0	
Chromium	1.39	2.00	1.250	0	111	80	120	0	0	
Cobalt	1.38	2.00	1.250	0	111	80	120	0	0	
Copper	1.40	2.00	1.250	0	112	80	120	0	0	
Manganese	1.41	2.00	1.250	0	112	80	120	0	0	
Molybdenum	1.27	2.00	1.250	0	101	80	120	0	0	
Nickel	1.41	2.00	1.250	0	113	80	120	0	0	
Thallium	1.29	1.00	1.250	0	103	80	120	0	0	

Sample ID	DCS3-83002	Batch ID:	83002	TestNo:	SW6020A	Units:	mg/Kg
SampType:	DCS3	Run ID:	ICP-MS4_171031A	Analysis Date:	10/31/2017 11:29:00 A	Prep Date:	10/30/2017

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vanadium	2.66	2.50	2.500	0	106	80	120	0	0	
Zinc	3.25	2.50	2.500	0	130	80	120	0	0	S

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171031C

Sample ID	DCS3-83002	Batch ID:	83002	TestNo:	SW6020A	Units:	mg/Kg				
SampType:	DCS	Run ID:	ICP-MS4_171031C	Analysis Date:	10/31/2017 11:29:00 A	Prep Date:	10/30/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		2.52	2.50	2.500	0	101	60	140	0	0	N

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171113A

Sample ID	DCS1-83172		Batch ID:	83172		TestNo:	SW6020A		Units:	mg/L	
SampType:	DCS		Run ID:	ICP-MS4_171113A		Analysis Date:	11/13/2017 10:46:00 A		Prep Date:	11/10/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Aluminum	0.0268	0.0300	0.0200	0	134	80	120	0	0	S
Antimony	0.000981	0.00250	0.00100	0	98.1	80	120	0	0	
Beryllium	0.000541	0.00100	0.000500	0	108	80	120	0	0	
Cadmium	0.000536	0.00100	0.000500	0	107	80	120	0	0	
Lead	0.000488	0.00100	0.000500	0	97.6	80	120	0	0	

Sample ID	DCS2-83172		Batch ID:	83172		TestNo:	SW6020A		Units:	mg/L	
SampType:	DCS2		Run ID:	ICP-MS4_171113A		Analysis Date:	11/13/2017 10:48:00 A		Prep Date:	11/10/2017	
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Calcium	0.336	0.300	0.300	0	112	80	120	0	0	
Iron	0.0556	0.100	0.0500	0	111	80	120	0	0	
Magnesium	0.306	0.300	0.300	0	102	80	120	0	0	
Potassium	0.298	0.300	0.300	0	99.5	80	120	0	0	
Silver	0.00196	0.00200	0.00200	0	98.0	80	120	0	0	
Sodium	0.307	0.300	0.300	0	102	80	120	0	0	

Sample ID	DCS3-83172		Batch ID:	83172		TestNo:	SW6020A		Units:	mg/L	
SampType:	DCS3		Run ID:	ICP-MS4_171113A		Analysis Date:	11/13/2017 10:50:00 A		Prep Date:	11/10/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic	0.00497	0.00500	0.00500	0	99.4	80	120	0	0	
Barium	0.00502	0.0100	0.00500	0	100	80	120	0	0	
Chromium	0.00518	0.00500	0.00500	0	104	80	120	0	0	
Cobalt	0.00501	0.00500	0.00500	0	100	80	120	0	0	
Copper	0.00536	0.0100	0.00500	0	107	80	120	0	0	
Manganese	0.00506	0.0100	0.00500	0	101	80	120	0	0	
Molybdenum	0.00476	0.00500	0.00500	0	95.1	80	120	0	0	
Nickel	0.00512	0.0100	0.00500	0	103	80	120	0	0	
Selenium	0.00534	0.00500	0.00500	0	107	80	120	0	0	
Zinc	0.00576	0.00500	0.00500	0	115	80	120	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171113B

Sample ID	DCS3-83172	Batch ID:	83172	TestNo:	SW6020A	Units:	mg/L			
SampType:	DCS	Run ID:	ICP-MS4_171113B	Analysis Date:	11/13/2017 10:50:00 A	Prep Date:	11/10/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Uranium		0.00446	0.0100	0.00500	0	89.3	60	140	0	0 N

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171114B

Sample ID	DCS1-83172	Batch ID:	83172	TestNo:	SW6020A	Units:	mg/L			
SampType:	DCS	Run ID:	ICP-MS4_171114B	Analysis Date:	11/14/2017 12:06:00 P	Prep Date:	11/10/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	0.000496	0.00150	0.000500	0	99.2	80	120	0	0	
Vanadium	0.000542	0.00100	0.000500	0	108	80	120	0	0	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171116A

The QC data in batch 83242 applies to the following samples: 1711118-01A, 1711118-02A, 1711118-03A, 1711118-04A, 1711118-05A, 1711118-06A, 1711118-07A

Sample ID	MB-83242	Batch ID:	83242	TestNo:	SW6020A	Units:	mg/L			
SampType:	MBLK	Run ID:	ICP-MS4_171116A	Analysis Date:	11/16/2017 11:03:00 A	Prep Date:	11/15/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Aluminum	<0.0100	0.0300								
Antimony	<0.000800	0.00250								
Arsenic	<0.00200	0.00500								
Barium	<0.00300	0.0100								
Beryllium	<0.000300	0.00100								
Cadmium	<0.000300	0.00100								
Calcium	<0.100	0.300								
Chromium	<0.00200	0.00500								
Cobalt	<0.00300	0.00500								
Copper	<0.00200	0.0100								
Iron	<0.0300	0.100								
Lead	<0.000300	0.00100								
Magnesium	<0.100	0.300								
Manganese	<0.00300	0.0100								
Molybdenum	<0.00200	0.00500								
Nickel	<0.00300	0.0100								
Potassium	<0.100	0.300								
Selenium	<0.00200	0.00500								
Silver	<0.00100	0.00200								
Thallium	<0.000500	0.00150								
Vanadium	<0.000500	0.00100								
Zinc	<0.00200	0.00500								

Sample ID	LCS-83242			Batch ID:	83242		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS			Run ID:	ICP-MS4_171116A		Analysis Date:	11/16/2017 11:05:00 A		Prep Date:	11/15/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Aluminum	4.85	0.0300	5.00	0	97.0	80	120			
Antimony	0.202	0.00250	0.200	0	101	80	120			
Arsenic	0.199	0.00500	0.200	0	99.7	80	120			
Barium	0.201	0.0100	0.200	0	101	80	120			
Beryllium	0.206	0.00100	0.200	0	103	80	120			
Cadmium	0.207	0.00100	0.200	0	103	80	120			
Calcium	5.25	0.300	5.00	0	105	80	120			
Chromium	0.202	0.00500	0.200	0	101	80	120			
Cobalt	0.203	0.00500	0.200	0	101	80	120			
Copper	0.204	0.0100	0.200	0	102	80	120			
Iron	4.82	0.100	5.00	0	96.5	80	120			
Lead	0.198	0.00100	0.200	0	99.1	80	120			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171116A

Sample ID	LCS-83242	Batch ID:	83242	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCS	Run ID:	ICP-MS4_171116A	Analysis Date:	11/16/2017 11:05:00 A	Prep Date:	11/15/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	5.13	0.300	5.00	0	103	80	120			
Manganese	0.197	0.0100	0.200	0	98.4	80	120			
Molybdenum	0.200	0.00500	0.200	0	99.8	80	120			
Nickel	0.208	0.0100	0.200	0	104	80	120			
Potassium	4.93	0.300	5.00	0	98.5	80	120			
Selenium	0.197	0.00500	0.200	0	98.5	80	120			
Silver	0.205	0.00200	0.200	0	102	80	120			
Thallium	0.204	0.00150	0.200	0	102	80	120			
Vanadium	0.197	0.00100	0.200	0	98.5	80	120			
Zinc	0.206	0.00500	0.200	0	103	80	120			

Sample ID	LCSD-83242	Batch ID:	83242	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_171116A	Analysis Date: 11/16/2017 11:07:00 A		Prep Date:		11/15/2017		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	4.83	0.0300	5.00	0	96.7	80	120	0.353	15	
Antimony	0.200	0.00250	0.200	0	100	80	120	0.792	15	
Arsenic	0.203	0.00500	0.200	0	102	80	120	2.05	15	
Barium	0.201	0.0100	0.200	0	101	80	120	0.022	15	
Beryllium	0.206	0.00100	0.200	0	103	80	120	0.008	15	
Cadmium	0.206	0.00100	0.200	0	103	80	120	0.462	15	
Calcium	5.27	0.300	5.00	0	105	80	120	0.349	15	
Chromium	0.204	0.00500	0.200	0	102	80	120	0.654	15	
Cobalt	0.207	0.00500	0.200	0	103	80	120	1.91	15	
Copper	0.206	0.0100	0.200	0	103	80	120	1.18	15	
Iron	4.83	0.100	5.00	0	96.5	80	120	0.015	15	
Lead	0.200	0.00100	0.200	0	100	80	120	0.903	15	
Magnesium	5.11	0.300	5.00	0	102	80	120	0.376	15	
Manganese	0.197	0.0100	0.200	0	98.6	80	120	0.241	15	
Molybdenum	0.199	0.00500	0.200	0	99.4	80	120	0.436	15	
Nickel	0.211	0.0100	0.200	0	105	80	120	1.43	15	
Potassium	4.92	0.300	5.00	0	98.5	80	120	0.087	15	
Selenium	0.200	0.00500	0.200	0	100	80	120	1.48	15	
Silver	0.203	0.00200	0.200	0	101	80	120	0.860	15	
Thallium	0.204	0.00150	0.200	0	102	80	120	0.034	15	
Vanadium	0.197	0.00100	0.200	0	98.7	80	120	0.178	15	
Zinc	0.209	0.00500	0.200	0	104	80	120	1.32	15	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171116A

Sample ID	ICV-171116	Batch ID:	R95179	TestNo:	SW6020A	Units:	mg/L
SampType:	ICV	Run ID:	ICP-MS4_171116A	Analysis Date:	11/16/2017 10:47:00 A	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	2.41	0.0300	2.50	0	96.5	90	110			
Antimony	0.103	0.00250	0.100	0	103	90	110			
Arsenic	0.103	0.00500	0.100	0	103	90	110			
Barium	0.103	0.0100	0.100	0	103	90	110			
Beryllium	0.108	0.00100	0.100	0	108	90	110			
Cadmium	0.106	0.00100	0.100	0	106	90	110			
Calcium	2.62	0.300	2.50	0	105	90	110			
Chromium	0.108	0.00500	0.100	0	108	90	110			
Cobalt	0.106	0.00500	0.100	0	106	90	110			
Copper	0.107	0.0100	0.100	0	107	90	110			
Iron	2.52	0.100	2.50	0	101	90	110			
Lead	0.0994	0.00100	0.100	0	99.4	90	110			
Magnesium	2.69	0.300	2.50	0	108	90	110			
Manganese	0.100	0.0100	0.100	0	100	90	110			
Molybdenum	0.104	0.00500	0.100	0	104	90	110			
Nickel	0.109	0.0100	0.100	0	109	90	110			
Potassium	2.54	0.300	2.50	0	101	90	110			
Selenium	0.100	0.00500	0.100	0	100	90	110			
Silver	0.107	0.00200	0.100	0	107	90	110			
Thallium	0.0978	0.00150	0.100	0	97.8	90	110			
Vanadium	0.103	0.00100	0.100	0	103	90	110			
Zinc	0.106	0.00500	0.100	0	106	90	110			

Sample ID	LCVL-171116	Batch ID:	R95179	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_171116A	Analysis Date:	11/16/2017 10:54:00 A	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.100	0.0300	0.100	0	100	70	130			
Antimony	0.00200	0.00250	0.00200	0	100	70	130			
Arsenic	0.00503	0.00500	0.00500	0	101	70	130			
Barium	0.00507	0.0100	0.00500	0	101	70	130			
Beryllium	0.00113	0.00100	0.00100	0	113	70	130			
Cadmium	0.00106	0.00100	0.00100	0	106	70	130			
Calcium	0.114	0.300	0.100	0	114	70	130			
Chromium	0.00517	0.00500	0.00500	0	103	70	130			
Cobalt	0.00526	0.00500	0.00500	0	105	70	130			
Copper	0.00544	0.0100	0.00500	0	109	70	130			
Iron	0.109	0.100	0.100	0	109	70	130			
Lead	0.000997	0.00100	0.00100	0	99.7	70	130			
Magnesium	0.102	0.300	0.100	0	102	70	130			
Manganese	0.00515	0.0100	0.00500	0	103	70	130			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171116A

Sample ID	LCVL-171116	Batch ID:	R95179	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_171116A	Analysis Date:	11/16/2017 10:54:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Molybdenum	0.00519	0.00500	0.00500	0	104	70	130			
Nickel	0.00551	0.0100	0.00500	0	110	70	130			
Potassium	0.0988	0.300	0.100	0	98.8	70	130			
Selenium	0.00511	0.00500	0.00500	0	102	70	130			
Silver	0.00206	0.00200	0.00200	0	103	70	130			
Thallium	0.000993	0.00150	0.00100	0	99.3	70	130			
Vanadium	0.00104	0.00100	0.00100	0	104	70	130			
Zinc	0.00543	0.00500	0.00500	0	109	70	130			

Sample ID	CCV1-171116	Batch ID:	R95179	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_171116A	Analysis Date:	11/16/2017 11:50:00 A	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Aluminum	4.72	0.0300	5.00	0	94.3	90	110			
Antimony	0.198	0.00250	0.200	0	98.9	90	110			
Arsenic	0.198	0.00500	0.200	0	99.1	90	110			
Barium	0.200	0.0100	0.200	0	99.8	90	110			
Beryllium	0.179	0.00100	0.200	0	89.3	90	110			S
Cadmium	0.197	0.00100	0.200	0	98.6	90	110			
Calcium	5.11	0.300	5.00	0	102	90	110			
Chromium	0.195	0.00500	0.200	0	97.4	90	110			
Cobalt	0.195	0.00500	0.200	0	97.7	90	110			
Copper	0.194	0.0100	0.200	0	97.1	90	110			
Iron	4.74	0.100	5.00	0	94.7	90	110			
Lead	0.193	0.00100	0.200	0	96.7	90	110			
Magnesium	4.81	0.300	5.00	0	96.2	90	110			
Manganese	0.193	0.0100	0.200	0	96.7	90	110			
Molybdenum	0.190	0.00500	0.200	0	95.1	90	110			
Nickel	0.200	0.0100	0.200	0	99.8	90	110			
Potassium	4.90	0.300	5.00	0	97.9	90	110			
Selenium	0.196	0.00500	0.200	0	98.2	90	110			
Silver	0.197	0.00200	0.200	0	98.5	90	110			
Thallium	0.202	0.00150	0.200	0	101	90	110			
Vanadium	0.194	0.00100	0.200	0	96.8	90	110			
Zinc	0.199	0.00500	0.200	0	99.6	90	110			

Sample ID	LCVL1-171116	Batch ID:	R95179	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_171116A	Analysis Date:	11/16/2017 11:55:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Aluminum	0.0948	0.0300	0.100	0	94.8	70	130			
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Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171116A

Sample ID	LCVL1-171116	Batch ID:	R95179	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_171116A	Analysis Date:	11/16/2017 11:55:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	0.00202	0.00250	0.00200	0	101	70	130			
Arsenic	0.00509	0.00500	0.00500	0	102	70	130			
Barium	0.00517	0.0100	0.00500	0	103	70	130			
Beryllium	0.000917	0.00100	0.00100	0	91.7	70	130			
Cadmium	0.00105	0.00100	0.00100	0	105	70	130			
Calcium	0.108	0.300	0.100	0	108	70	130			
Chromium	0.00512	0.00500	0.00500	0	102	70	130			
Cobalt	0.00510	0.00500	0.00500	0	102	70	130			
Copper	0.00527	0.0100	0.00500	0	105	70	130			
Iron	0.105	0.100	0.100	0	105	70	130			
Lead	0.000971	0.00100	0.00100	0	97.1	70	130			
Magnesium	0.0964	0.300	0.100	0	96.4	70	130			
Manganese	0.00499	0.0100	0.00500	0	99.8	70	130			
Molybdenum	0.00494	0.00500	0.00500	0	98.9	70	130			
Nickel	0.00516	0.0100	0.00500	0	103	70	130			
Potassium	0.0997	0.300	0.100	0	99.7	70	130			
Selenium	0.00558	0.00500	0.00500	0	112	70	130			
Silver	0.00195	0.00200	0.00200	0	97.7	70	130			
Thallium	0.000987	0.00150	0.00100	0	98.7	70	130			
Vanadium	0.00132	0.00100	0.00100	0	132	70	130			S
Zinc	0.00516	0.00500	0.00500	0	103	70	130			

Sample ID	CCV2-171116	Batch ID:	R95179	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_171116A	Analysis Date: 11/16/2017 12:11:00 P		Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	4.76	0.0300	5.00	0	95.1	90	110			
Antimony	0.203	0.00250	0.200	0	102	90	110			
Arsenic	0.204	0.00500	0.200	0	102	90	110			
Barium	0.204	0.0100	0.200	0	102	90	110			
Beryllium	0.174	0.00100	0.200	0	87.1	90	110			S
Cadmium	0.199	0.00100	0.200	0	99.3	90	110			
Chromium	0.197	0.00500	0.200	0	98.5	90	110			
Cobalt	0.195	0.00500	0.200	0	97.5	90	110			
Copper	0.194	0.0100	0.200	0	97.0	90	110			
Iron	4.82	0.100	5.00	0	96.4	90	110			
Lead	0.197	0.00100	0.200	0	98.4	90	110			
Manganese	0.199	0.0100	0.200	0	99.3	90	110			
Molybdenum	0.191	0.00500	0.200	0	95.3	90	110			
Nickel	0.199	0.0100	0.200	0	99.6	90	110			
Selenium	0.199	0.00500	0.200	0	99.7	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171116A

Sample ID	CCV2-171116	Batch ID:	R95179	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_171116A	Analysis Date:	11/16/2017 12:11:00 P	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Silver	0.194	0.00200	0.200	0	97.1	90	110			
Thallium	0.200	0.00150	0.200	0	100	90	110			
Vanadium	0.195	0.00100	0.200	0	97.6	90	110			
Zinc	0.202	0.00500	0.200	0	101	90	110			

Sample ID	LCVL2-171116	Batch ID:	R95179	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_171116A	Analysis Date:	11/16/2017 12:18:00 P	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0958	0.0300	0.100	0	95.8	70	130			
Antimony	0.00203	0.00250	0.00200	0	101	70	130			
Arsenic	0.00522	0.00500	0.00500	0	104	70	130			
Barium	0.00517	0.0100	0.00500	0	103	70	130			
Beryllium	0.000871	0.00100	0.00100	0	87.1	70	130			
Cadmium	0.00104	0.00100	0.00100	0	104	70	130			
Chromium	0.00506	0.00500	0.00500	0	101	70	130			
Cobalt	0.00502	0.00500	0.00500	0	100	70	130			
Copper	0.00515	0.0100	0.00500	0	103	70	130			
Iron	0.106	0.100	0.100	0	106	70	130			
Lead	0.000978	0.00100	0.00100	0	97.8	70	130			
Manganese	0.00516	0.0100	0.00500	0	103	70	130			
Molybdenum	0.00486	0.00500	0.00500	0	97.2	70	130			
Nickel	0.00517	0.0100	0.00500	0	103	70	130			
Selenium	0.00487	0.00500	0.00500	0	97.4	70	130			
Silver	0.00195	0.00200	0.00200	0	97.6	70	130			
Thallium	0.000984	0.00150	0.00100	0	98.4	70	130			
Vanadium	0.00136	0.00100	0.00100	0	136	70	130			S
Zinc	0.00520	0.00500	0.00500	0	104	70	130			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171116B

The QC data in batch 83242 applies to the following samples: 1711118-01A, 1711118-02A, 1711118-03A, 1711118-04A, 1711118-05A, 1711118-06A, 1711118-07A

Sample ID	MB-83242		Batch ID:	83242		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_171116B		Analysis Date:	11/16/2017 11:03:00 A		Prep Date:	11/15/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Uranium	<0.00300	0.0100								N
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Sample ID	LCS-83242			Batch ID:	83242		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS			Run ID:	ICP-MS4_171116B		Analysis Date:	11/16/2017 11:05:00 A		Prep Date:	11/15/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Uranium	0.195	0.0100	0.200	0	97.3	80	120			N
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Sample ID	LCSD-83242	Batch ID:	83242	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCSD	Run ID:	ICP-MS4_171116B	Analysis Date:	11/16/2017 11:07:00 A	Prep Date:	11/15/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Uranium	0.194	0.0100	0.200	0	97.2	80	120	0.014	25	N
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Sample ID	1711126-01A SD	Batch ID:	83242	TestNo:	SW6020A	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS4_171116B	Analysis Date:	11/16/2017 11:13:00 A	Prep Date:	11/15/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Uranium	<0.0150	0.0500	0	0.00895				0	10	N
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Sample ID	1711126-01A PDS	Batch ID:	83242	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_171116B	Analysis Date:	11/16/2017 11:33:00 A	Prep Date:	11/15/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Uranium	0.205	0.0100	0.200	0.00895	98.2	80	120			N
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Sample ID	1711126-01A MS	Batch ID:	83242	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_171116B	Analysis Date:	11/16/2017 11:34:00 A	Prep Date:	11/15/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Uranium	0.204	0.0100	0.200	0.00895	97.6	80	120			N
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Sample ID	1711126-01A MSD	Batch ID:	83242	TestNo:	SW6020A	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS4_171116B	Analysis Date:	11/16/2017 11:36:00 A	Prep Date:	11/15/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Uranium	0.203	0.0100	0.200	0.00895	97.3	80	120	0.327	25	N
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Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171116B

Sample ID	ICV-171116	Batch ID:	R95180	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_171116B	Analysis Date:	11/16/2017 10:47:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.0978	0.0100	0.100	0	97.8	90	110			N

Sample ID	LCVL-171116	Batch ID:	R95180	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_171116B	Analysis Date:	11/16/2017 10:54:00 A	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		0.00477	0.0100	0.00500	0	95.3	70	130			N

Sample ID	CCV1-171116	Batch ID:	R95180	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_171116B	Analysis Date:	11/16/2017 11:50:00 A	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		0.187	0.0100	0.200	0	93.5	90	110			N

Sample ID	LCVL1-171116	Batch ID:	R95180	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_171116B	Analysis Date:	11/16/2017 11:55:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00462	0.0100	0.00500	0	92.5	70	130			N

Sample ID	CCV2-171116		Batch ID:	R95180		TestNo:	SW6020A		Units:	mg/L	
SampType:	CCV		Run ID:	ICP-MS4_171116B		Analysis Date:	11/16/2017 12:11:00 P		Prep Date:		
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Uranium	0.193	0.0100	0.200	0	96.3	90	110				N

Sample ID	LCVL2-171116	Batch ID:	R95180	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_171116B	Analysis Date:	11/16/2017 12:18:00 P	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		0.00469	0.0100	0.00500	0	93.8	70	130			N

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117A

The QC data in batch 83242 applies to the following samples: 1711118-01A, 1711118-02A, 1711118-03A, 1711118-04A, 1711118-05A, 1711118-06A, 1711118-07A

Sample ID	MB-83242		Batch ID:	83242		TestNo:	SW6020A		Units:	mg/L	
SampType:	MBLK		Run ID:	ICP-MS4_171117A		Analysis Date:	11/17/2017 10:45:00 A		Prep Date:	11/15/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Sodium	<0.100	0.300								
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Sample ID	LCS-83242		Batch ID:	83242		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCS		Run ID:	ICP-MS4_171117A		Analysis Date:	11/17/2017 10:47:00 A		Prep Date:	11/15/2017	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Sodium	5.13	0.300	5.00	0	103	80	120			
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Sample ID	LCSD-83242	Batch ID:	83242	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS4_171117A	Analysis Date:	11/17/2017 10:48:00 A	Prep Date:	11/15/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Sodium	5.15	0.300	5.00	0	103	80	120	0.451	15	
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Sample ID	1711126-01A SD	Batch ID:	83242	TestNo:	SW6020A	Units:	mg/L				
SampType:	SD	Run ID:	ICP-MS4_171117A	Analysis Date:	11/17/2017 10:54:00 A	Prep Date:	11/15/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Aluminum	13.1	7.50	0	13.7				4.61	10	
Antimony	<0.200	0.625	0	0				0	10	
Arsenic	<0.500	1.25	0	0				0	10	
Barium	<0.750	2.50	0	0				0	10	
Beryllium	<0.0750	0.250	0	0				0	10	
Cadmium	<0.0750	0.250	0	0				0	10	
Chromium	<0.500	1.25	0	0				0	10	
Cobalt	<0.750	1.25	0	0				0	10	
Copper	<0.500	2.50	0	0				0	10	
Iron	16.5	25.0	0	17.2				4.66	10	
Lead	<0.0750	0.250	0	0.0230				0	10	
Magnesium	729	75.0	0	776				6.14	10	
Manganese	2.54	2.50	0	2.62				2.98	10	
Molybdenum	<0.500	1.25	0	0				0	10	
Nickel	<0.750	2.50	0	0				0	10	
Potassium	119	75.0	0	125				4.89	10	
Selenium	<0.500	1.25	0	0				0	10	
Silver	<0.250	0.500	0	0				0	10	
Thallium	<0.125	0.375	0	0				0	10	
Vanadium	<0.125	0.250	0	0.0382				0	10	
Zinc	<0.500	1.25	0	0				0	10	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117A

Sample ID	1711126-01A PDS	Batch ID:	83242	TestNo:	SW6020A	Units:	mg/L			
SampType:	PDS	Run ID:	ICP-MS4_171117A	Analysis Date:	11/17/2017 11:14:00 A	Prep Date:	11/15/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Aluminum	263	1.50	250	13.7	99.8	80	120			
Antimony	10.5	0.125	10.0	0	105	80	120			
Arsenic	10.4	0.250	10.0	0	104	80	120			
Barium	10.5	0.500	10.0	0	105	80	120			
Beryllium	9.94	0.0500	10.0	0	99.4	80	120			
Cadmium	10.2	0.0500	10.0	0	102	80	120			
Chromium	10.1	0.250	10.0	0	101	80	120			
Cobalt	10.0	0.250	10.0	0	100	80	120			
Copper	9.99	0.500	10.0	0	99.9	80	120			
Iron	265	5.00	250	17.2	99.1	80	120			
Lead	9.92	0.0500	10.0	0.0230	98.9	80	120			
Magnesium	1050	15.0	250	776	109	80	120			
Manganese	12.4	0.500	10.0	2.62	97.6	80	120			
Molybdenum	10.3	0.250	10.0	0	103	80	120			
Nickel	10.2	0.500	10.0	0	102	80	120			
Potassium	362	15.0	250	125	94.5	80	120			
Selenium	10.1	0.250	10.0	0	101	80	120			
Silver	9.78	0.100	10.0	0	97.8	80	120			
Thallium	10.2	0.0750	10.0	0	102	80	120			
Vanadium	10.1	0.0500	10.0	0.0382	101	80	120			
Zinc	10.2	0.250	10.0	0	102	80	120			

Sample ID	1711126-01A MS	Batch ID:	83242	TestNo:	SW6020A	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS4_171117A	Analysis Date:	11/17/2017 11:16:00 A	Prep Date:	11/15/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Aluminum	19.9	1.50	5.00	13.7	125	80	120			S
Antimony	0.207	0.125	0.200	0	103	80	120			
Arsenic	0.228	0.250	0.200	0	114	80	120			
Barium	0.333	0.500	0.200	0	166	80	120			S
Beryllium	0.196	0.0500	0.200	0	97.9	80	120			
Cadmium	0.206	0.0500	0.200	0	103	80	120			
Calcium	2560	15.0	5.00	2480	1600	80	120			S
Chromium	0.225	0.250	0.200	0	112	80	120			
Cobalt	0.245	0.250	0.200	0	123	80	120			S
Copper	0.221	0.500	0.200	0	111	80	120			
Iron	23.9	5.00	5.00	17.2	134	80	120			S
Lead	0.223	0.0500	0.200	0.0230	99.9	80	120			
Magnesium	813	15.0	5.00	776	742	80	120			S
Manganese	2.90	0.500	0.200	2.62	141	80	120			S
Molybdenum	0.226	0.250	0.200	0	113	80	120			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117A

Sample ID 1711126-01A MS	Batch ID: 83242	TestNo: SW6020A	Units: mg/L
SampType: MS	Run ID: ICP-MS4_171117A	Analysis Date: 11/17/2017 11:16:00 A	Prep Date: 11/15/2017

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nickel	0.294	0.500	0.200	0	147	80	120			S
Potassium	134	15.0	5.00	125	182	80	120			S
Selenium	0.249	0.250	0.200	0	125	80	120			S
Silver	0.192	0.100	0.200	0	96.0	80	120			
Sodium	11900	15.0	5.00	11600	5570	80	120			S
Thallium	0.198	0.0750	0.200	0	99.0	80	120			
Vanadium	0.238	0.0500	0.200	0.0382	100	80	120			
Zinc	0.296	0.250	0.200	0	148	80	120			S

Sample ID 1711126-01A MSD	Batch ID: 83242	TestNo: SW6020A	Units: mg/L
SampType: MSD	Run ID: ICP-MS4_171117A	Analysis Date: 11/17/2017 11:18:00 A	Prep Date: 11/15/2017

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	21.8	1.50	5.00	13.7	163	80	120	9.23	15	S
Antimony	0.177	0.125	0.200	0	88.4	80	120	15.5	15	R
Arsenic	0.216	0.250	0.200	0	108	80	120	5.54	15	
Barium	0.323	0.500	0.200	0	162	80	120	3.00	15	S
Beryllium	0.182	0.0500	0.200	0	90.9	80	120	7.34	15	
Cadmium	0.198	0.0500	0.200	0	98.9	80	120	3.96	15	
Calcium	2470	15.0	5.00	2480	-176	80	120	3.53	15	S
Chromium	0.220	0.250	0.200	0	110	80	120	2.18	15	
Cobalt	0.233	0.250	0.200	0	116	80	120	5.35	15	
Copper	0.209	0.500	0.200	0	104	80	120	5.79	15	
Iron	23.9	5.00	5.00	17.2	132	80	120	0.276	15	S
Lead	0.212	0.0500	0.200	0.0230	94.6	80	120	4.85	15	
Magnesium	767	15.0	5.00	776	-169	80	120	5.77	15	S
Manganese	2.82	0.500	0.200	2.62	100	80	120	2.85	15	
Molybdenum	0.206	0.250	0.200	0	103	80	120	9.51	15	
Nickel	0.280	0.500	0.200	0	140	80	120	4.87	15	S
Potassium	131	15.0	5.00	125	124	80	120	2.20	15	S
Selenium	0.209	0.250	0.200	0	104	80	120	17.7	15	R
Silver	0.187	0.100	0.200	0	93.6	80	120	2.43	15	
Sodium	11400	15.0	5.00	11600	-2870	80	120	3.62	15	S
Thallium	0.190	0.0750	0.200	0	94.9	80	120	4.25	15	
Vanadium	0.238	0.0500	0.200	0.0382	99.7	80	120	0.252	15	
Zinc	0.275	0.250	0.200	0	138	80	120	7.47	15	S

Sample ID 1711126-01A SD	Batch ID: 83242	TestNo: SW6020A	Units: mg/L
SampType: SD	Run ID: ICP-MS4_171117A	Analysis Date: 11/17/2017 11:31:00 A	Prep Date: 11/15/2017

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
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Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117A

Sample ID	1711126-01A SD			Batch ID:	83242		TestNo:	SW6020A		Units:	mg/L	
SampType:	SD			Run ID:	ICP-MS4_171117A		Analysis Date:	11/17/2017 11:31:00 A		Prep Date:	11/15/2017	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	2480	750	0	2470				0.196	10	
Sodium	11700	750	0	11600				0.656	10	

Sample ID	1711126-01A PDS	Batch ID:	83242	TestNo:	SW6020A	Units:	mg/L				
SampType:	PDS	Run ID:	ICP-MS4_171117A	Analysis Date:	11/17/2017 11:33:00 A	Prep Date:	11/15/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Calcium	5090	150	2500	2470	105	80	120			
Sodium	14100	150	2500	11600	99.9	80	120			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117A

Sample ID	ICV-171117	Batch ID:	R95204	TestNo:	SW6020A	Units:	mg/L
SampType:	ICV	Run ID:	ICP-MS4_171117A	Analysis Date:	11/17/2017 10:32:00 A	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	2.45	0.0300	2.50	0	97.8	90	110			
Antimony	0.104	0.00250	0.100	0	104	90	110			
Arsenic	0.102	0.00500	0.100	0	102	90	110			
Barium	0.103	0.0100	0.100	0	103	90	110			
Beryllium	0.106	0.00100	0.100	0	106	90	110			
Cadmium	0.105	0.00100	0.100	0	105	90	110			
Calcium	2.58	0.300	2.50	0	103	90	110			
Chromium	0.105	0.00500	0.100	0	105	90	110			
Cobalt	0.103	0.00500	0.100	0	103	90	110			
Copper	0.106	0.0100	0.100	0	106	90	110			
Iron	2.64	0.100	2.50	0	106	90	110			
Lead	0.0985	0.00100	0.100	0	98.5	90	110			
Magnesium	2.68	0.300	2.50	0	107	90	110			
Manganese	0.101	0.0100	0.100	0	101	90	110			
Molybdenum	0.0998	0.00500	0.100	0	99.8	90	110			
Nickel	0.107	0.0100	0.100	0	107	90	110			
Potassium	2.48	0.300	2.50	0	99.3	90	110			
Selenium	0.101	0.00500	0.100	0	101	90	110			
Silver	0.106	0.00200	0.100	0	106	90	110			
Sodium	2.67	0.300	2.50	0	107	90	110			
Thallium	0.0959	0.00150	0.100	0	95.9	90	110			
Vanadium	0.102	0.00100	0.100	0	102	90	110			
Zinc	0.105	0.00500	0.100	0	105	90	110			

Sample ID	LCVL-171117	Batch ID:	R95204	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_171117A	Analysis Date:	11/17/2017 10:37:00 A	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0992	0.0300	0.100	0	99.2	70	130			
Antimony	0.00200	0.00250	0.00200	0	100	70	130			
Arsenic	0.00498	0.00500	0.00500	0	99.5	70	130			
Barium	0.00498	0.0100	0.00500	0	99.5	70	130			
Beryllium	0.00111	0.00100	0.00100	0	111	70	130			
Cadmium	0.00105	0.00100	0.00100	0	105	70	130			
Calcium	0.112	0.300	0.100	0	112	70	130			
Chromium	0.00513	0.00500	0.00500	0	103	70	130			
Cobalt	0.00507	0.00500	0.00500	0	101	70	130			
Copper	0.00547	0.0100	0.00500	0	109	70	130			
Iron	0.112	0.100	0.100	0	112	70	130			
Lead	0.000987	0.00100	0.00100	0	98.7	70	130			
Magnesium	0.101	0.300	0.100	0	101	70	130			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117A

Sample ID	LCVL-171117			Batch ID:	R95204		TestNo:	SW6020A		Units:	mg/L	
SampType:	LCVL			Run ID:	ICP-MS4_171117A		Analysis Date:	11/17/2017 10:37:00 A		Prep Date:		
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Manganese	0.00503	0.0100	0.00500	0	101	70	130			
Molybdenum	0.00496	0.00500	0.00500	0	99.3	70	130			
Nickel	0.00529	0.0100	0.00500	0	106	70	130			
Potassium	0.0946	0.300	0.100	0	94.6	70	130			
Selenium	0.00538	0.00500	0.00500	0	108	70	130			
Silver	0.00199	0.00200	0.00200	0	99.4	70	130			
Sodium	0.101	0.300	0.100	0	101	70	130			
Thallium	0.000971	0.00150	0.00100	0	97.1	70	130			
Vanadium	0.00106	0.00100	0.00100	0	106	70	130			
Zinc	0.00563	0.00500	0.00500	0	113	70	130			

Sample ID	CCV1-171117	Batch ID:	R95204	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_171117A	Analysis Date:	11/17/2017 11:20:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Aluminum	5.09	0.0300	5.00	0	102	90	110			
Antimony	0.199	0.00250	0.200	0	99.7	90	110			
Arsenic	0.198	0.00500	0.200	0	99.2	90	110			
Barium	0.200	0.0100	0.200	0	99.9	90	110			
Beryllium	0.195	0.00100	0.200	0	97.5	90	110			
Cadmium	0.199	0.00100	0.200	0	99.6	90	110			
Calcium	5.28	0.300	5.00	0	106	90	110			
Chromium	0.195	0.00500	0.200	0	97.6	90	110			
Cobalt	0.195	0.00500	0.200	0	97.6	90	110			
Copper	0.203	0.0100	0.200	0	101	90	110			
Iron	5.02	0.100	5.00	0	100	90	110			
Lead	0.195	0.00100	0.200	0	97.6	90	110			
Magnesium	5.04	0.300	5.00	0	101	90	110			
Manganese	0.196	0.0100	0.200	0	98.2	90	110			
Molybdenum	0.188	0.00500	0.200	0	94.0	90	110			
Nickel	0.203	0.0100	0.200	0	101	90	110			
Potassium	4.90	0.300	5.00	0	97.9	90	110			
Selenium	0.205	0.00500	0.200	0	103	90	110			
Silver	0.197	0.00200	0.200	0	98.5	90	110			
Sodium	5.17	0.300	5.00	0	103	90	110			
Thallium	0.198	0.00150	0.200	0	99.0	90	110			
Vanadium	0.192	0.00100	0.200	0	95.8	90	110			
Zinc	0.204	0.00500	0.200	0	102	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117A

Sample ID	LCVL1-171117	Batch ID:	R95204	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_171117A	Analysis Date:	11/17/2017 11:25:00 A	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0992	0.0300	0.100	0	99.2	70	130			
Antimony	0.00203	0.00250	0.00200	0	101	70	130			
Arsenic	0.00505	0.00500	0.00500	0	101	70	130			
Barium	0.00509	0.0100	0.00500	0	102	70	130			
Beryllium	0.000961	0.00100	0.00100	0	96.1	70	130			
Cadmium	0.00107	0.00100	0.00100	0	107	70	130			
Calcium	0.116	0.300	0.100	0	116	70	130			
Chromium	0.00494	0.00500	0.00500	0	98.8	70	130			
Cobalt	0.00491	0.00500	0.00500	0	98.3	70	130			
Copper	0.00536	0.0100	0.00500	0	107	70	130			
Iron	0.110	0.100	0.100	0	110	70	130			
Lead	0.000976	0.00100	0.00100	0	97.6	70	130			
Magnesium	0.0983	0.300	0.100	0	98.3	70	130			
Manganese	0.00509	0.0100	0.00500	0	102	70	130			
Molybdenum	0.00480	0.00500	0.00500	0	96.1	70	130			
Nickel	0.00513	0.0100	0.00500	0	103	70	130			
Potassium	0.0955	0.300	0.100	0	95.5	70	130			
Selenium	0.00551	0.00500	0.00500	0	110	70	130			
Silver	0.00193	0.00200	0.00200	0	96.3	70	130			
Sodium	0.106	0.300	0.100	0	106	70	130			
Thallium	0.000941	0.00150	0.00100	0	94.1	70	130			
Vanadium	0.00106	0.00100	0.00100	0	106	70	130			
Zinc	0.00568	0.00500	0.00500	0	114	70	130			

Sample ID	CCV2-171117	Batch ID:	R95204	TestNo:	SW6020A	Units:	mg/L
SampType:	CCV	Run ID:	ICP-MS4_171117A	Analysis Date:	11/17/2017 11:57:00 A	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	5.34	0.300	5.00	0	107	90	110			
Magnesium	5.04	0.300	5.00	0	101	90	110			
Manganese	0.197	0.0100	0.200	0	98.7	90	110			
Potassium	4.90	0.300	5.00	0	98.1	90	110			
Sodium	5.11	0.300	5.00	0	102	90	110			

Sample ID	LCVL2-171117	Batch ID:	R95204	TestNo:	SW6020A	Units:	mg/L
SampType:	LCVL	Run ID:	ICP-MS4_171117A	Analysis Date:	11/17/2017 12:01:00 P	Prep Date:	

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	0.112	0.300	0.100	0	112	70	130			
Magnesium	0.0997	0.300	0.100	0	99.7	70	130			
Manganese	0.00502	0.0100	0.00500	0	100	70	130			

Qualifiers:

B	Analyte detected in the associated Method Blank	DF	Dilution Factor
J	Analyte detected between MDL and RL	MDL	Method Detection Limit
ND	Not Detected at the Method Detection Limit	R	RPD outside accepted control limits
RL	Reporting Limit	S	Spike Recovery outside control limits
J	Analyte detected between SDL and RL	N	Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117A

Sample ID	LCVL2-171117	Batch ID:	R95204	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_171117A	Analysis Date:	11/17/2017 12:01:00 P	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Potassium	0.0947	0.300	0.100	0	94.7	70	130			
Sodium	0.0944	0.300	0.100	0	94.4	70	130			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117F

The QC data in batch 83247 applies to the following samples: 1711118-08A, 1711118-09A

Sample ID MB-83247	Batch ID: 83247	TestNo: SW6020A	Units: mg/Kg
SampType: MBLK	Run ID: ICP-MS4_171117F	Analysis Date: 11/17/2017 4:29:00 PM	Prep Date: 11/16/2017

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	<12.5	37.5								
Antimony	<0.500	1.00								
Arsenic	<0.500	1.00								
Barium	<0.500	2.00								
Beryllium	<0.100	0.300								
Cadmium	<0.100	0.300								
Calcium	<12.5	37.5								
Chromium	<0.500	2.00								
Cobalt	<0.500	2.00								
Copper	<0.500	2.00								
Iron	<12.5	37.5								
Lead	<0.100	0.300								
Magnesium	<12.5	37.5								
Manganese	<0.500	2.00								
Molybdenum	<0.500	2.00								
Nickel	<0.500	2.00								
Potassium	<12.5	37.5								
Selenium	<0.150	0.500								
Silver	<0.100	0.200								
Sodium	17.1	37.5								
Thallium	<0.500	1.00								
Vanadium	<1.00	2.50								
Zinc	<1.00	2.50								

Sample ID LCS-83247	Batch ID: 83247	TestNo: SW6020A	Units: mg/Kg
SampType: LCS	Run ID: ICP-MS4_171117F	Analysis Date: 11/17/2017 4:31:00 PM	Prep Date: 11/16/2017

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	255	37.5	250.0	0	102	80	120			
Antimony	50.1	1.00	50.00	0	100	80	120			
Arsenic	50.0	1.00	50.00	0	100	80	120			
Barium	51.3	2.00	50.00	0	103	80	120			
Beryllium	46.4	0.300	50.00	0	92.8	80	120			
Cadmium	49.3	0.300	50.00	0	98.6	80	120			
Calcium	1320	37.5	1250	0	106	80	120			
Chromium	49.5	2.00	50.00	0	99.0	80	120			
Cobalt	48.6	2.00	50.00	0	97.1	80	120			
Copper	50.0	2.00	50.00	0	100	80	120			
Iron	252	37.5	250.0	0	101	80	120			
Lead	48.2	0.300	50.00	0	96.5	80	120			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117F

Sample ID	LCS-83247			Batch ID:	83247		TestNo:	SW6020A		Units:	mg/Kg	
SampType:	LCS			Run ID:	ICP-MS4_171117F		Analysis Date:	11/17/2017 4:31:00 PM		Prep Date:	11/16/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Magnesium	1230	37.5	1250	0	98.5	80	120			
Manganese	48.9	2.00	50.00	0	97.7	80	120			
Molybdenum	47.2	2.00	50.00	0	94.5	80	120			
Nickel	50.4	2.00	50.00	0	101	80	120			
Potassium	1220	37.5	1250	0	97.6	80	120			
Selenium	49.1	0.500	50.00	0	98.1	80	120			
Silver	48.7	0.200	50.00	0	97.3	80	120			
Sodium	1260	37.5	1250	0	101	80	120			
Thallium	50.4	1.00	50.00	0	101	80	120			
Vanadium	48.4	2.50	50.00	0	96.7	80	120			
Zinc	50.3	2.50	50.00	0	101	80	120			

Sample ID	LCSD-83247			Batch ID:	83247		TestNo:	SW6020A		Units:	mg/Kg	
SampType:	LCSD			Run ID:	ICP-MS4_171117F		Analysis Date:	11/17/2017 4:33:00 PM		Prep Date:	11/16/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Aluminum	259	37.5	250.0	0	104	80	120	1.51	25	
Antimony	50.4	1.00	50.00	0	101	80	120	0.777	25	
Arsenic	50.8	1.00	50.00	0	102	80	120	1.53	25	
Barium	51.9	2.00	50.00	0	104	80	120	1.34	25	
Beryllium	47.2	0.300	50.00	0	94.4	80	120	1.79	25	
Cadmium	49.6	0.300	50.00	0	99.2	80	120	0.608	25	
Calcium	1320	37.5	1250	0	106	80	120	0.188	25	
Chromium	49.8	2.00	50.00	0	99.5	80	120	0.595	25	
Cobalt	49.1	2.00	50.00	0	98.3	80	120	1.18	25	
Copper	50.9	2.00	50.00	0	102	80	120	1.88	25	
Iron	257	37.5	250.0	0	103	80	120	1.93	25	
Lead	48.7	0.300	50.00	0	97.4	80	120	0.998	25	
Magnesium	1250	37.5	1250	0	99.9	80	120	1.36	25	
Manganese	49.4	2.00	50.00	0	98.7	80	120	0.992	25	
Molybdenum	47.8	2.00	50.00	0	95.6	80	120	1.19	25	
Nickel	50.6	2.00	50.00	0	101	80	120	0.367	25	
Potassium	1230	37.5	1250	0	98.4	80	120	0.852	25	
Selenium	49.5	0.500	50.00	0	98.9	80	120	0.791	25	
Silver	49.0	0.200	50.00	0	98.1	80	120	0.773	25	
Sodium	1260	37.5	1250	0	101	80	120	0.570	25	
Thallium	51.2	1.00	50.00	0	102	80	120	1.75	25	
Vanadium	48.7	2.50	50.00	0	97.3	80	120	0.633	25	
Zinc	50.7	2.50	50.00	0	101	80	120	0.758	25	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117F

Sample ID	1711110-02A SD	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg-dry			
SampType:	SD	Run ID:	ICP-MS4_171117F	Analysis Date:	11/17/2017 4:39:00 PM	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	<2.71	5.41	0	0				0	10	
Arsenic	16.0	5.41	0	15.90				0.494	10	
Barium	145	10.8	0	147.0				1.34	10	
Beryllium	1.33	1.62	0	1.123				17.2	10	R
Cadmium	<0.541	1.62	0	0.3935				0	10	
Chromium	46.9	10.8	0	45.22				3.60	10	
Cobalt	10.9	10.8	0	10.62				2.92	10	
Copper	30.0	10.8	0	28.27				5.83	10	
Lead	88.0	1.62	0	91.77				4.14	10	
Magnesium	5070	203	0	5176				2.13	10	
Molybdenum	<2.71	10.8	0	0.9417				0	10	
Nickel	26.8	10.8	0	25.85				3.47	10	
Potassium	4780	203	0	5162				7.62	10	
Selenium	4.01	2.71	0	3.410				16.3	10	R
Silver	<0.541	1.08	0	0.1334				0	10	
Sodium	124	203	0	73.60				51.0	10	R
Thallium	<2.71	5.41	0	0.6346				0	10	
Vanadium	75.5	13.5	0	73.78				2.33	10	
Zinc	93.3	13.5	0	87.96				5.87	10	

Sample ID	1711110-02A PDS	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg-dry			
SampType:	PDS	Run ID:	ICP-MS4_171117F	Analysis Date:	11/17/2017 4:57:00 PM	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	58.2	1.08	54.12	0	108	80	120			
Arsenic	73.1	1.08	54.12	15.90	106	80	120			
Barium	212	2.16	54.12	147.0	119	80	120			
Beryllium	49.1	0.325	54.12	1.123	88.7	80	120			
Cadmium	54.9	0.325	54.12	0.3935	101	80	120			
Chromium	99.5	2.16	54.12	45.22	100	80	120			
Cobalt	65.4	2.16	54.12	10.62	101	80	120			
Copper	82.2	2.16	54.12	28.27	99.6	80	120			
Lead	154	0.325	54.12	91.77	114	80	120			
Magnesium	6410	40.6	1353	5176	91.2	80	120			
Molybdenum	54.6	2.16	54.12	0.9417	99.2	80	120			
Nickel	81.5	2.16	54.12	25.85	103	80	120			
Potassium	6680	40.6	1353	5162	112	80	120			
Selenium	58.5	0.541	54.12	3.410	102	80	120			
Silver	53.1	0.216	54.12	0.1334	97.9	80	120			
Sodium	1390	40.6	1353	73.60	97.5	80	120			
Thallium	56.6	1.08	54.12	0.6346	103	80	120			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117F

Sample ID	1711110-02A PDS	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg-dry			
SampType:	PDS	Run ID:	ICP-MS4_171117F	Analysis Date:	11/17/2017 4:57:00 PM	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vanadium	128	2.71	54.12	73.78	100	80	120			
Zinc	144	2.71	54.12	87.96	104	80	120			

Sample ID	1711110-02A MS	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg-dry			
SampType:	MS	Run ID:	ICP-MS4_171117F	Analysis Date:	11/17/2017 4:58:00 PM	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	37800	41.0	273.2	38360	-218	80	120			S
Antimony	42.0	1.09	54.63	0	76.9	80	120			S
Arsenic	69.5	1.09	54.63	15.90	98.2	80	120			
Barium	242	2.19	54.63	147.0	173	80	120			S
Beryllium	47.4	0.328	54.63	1.123	84.8	80	120			
Cadmium	52.7	0.328	54.63	0.3935	95.7	80	120			
Calcium	15100	41.0	1366	14660	28.7	80	120			S
Chromium	93.9	2.19	54.63	45.22	89.2	80	120			
Cobalt	63.2	2.19	54.63	10.62	96.2	80	120			
Copper	74.6	2.19	54.63	28.27	84.8	80	120			
Iron	23800	41.0	273.2	23320	192	80	120			S
Lead	139	0.328	54.63	91.77	86.5	80	120			
Magnesium	6240	41.0	1366	5176	77.8	80	120			S
Manganese	983	2.19	54.63	673.9	565	80	120			S
Molybdenum	50.2	2.19	54.63	0.9417	90.1	80	120			
Nickel	79.3	2.19	54.63	25.85	97.8	80	120			
Potassium	6480	41.0	1366	5162	96.9	80	120			
Selenium	54.7	0.546	54.63	3.410	93.8	80	120			
Silver	50.6	0.219	54.63	0.1334	92.4	80	120			
Sodium	1310	41.0	1366	73.60	90.6	80	120			
Thallium	54.8	1.09	54.63	0.6346	99.2	80	120			
Vanadium	126	2.73	54.63	73.78	95.1	80	120			
Zinc	140	2.73	54.63	87.96	95.9	80	120			

Sample ID	1711110-02A MSD	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg-dry			
SampType:	MSD	Run ID:	ICP-MS4_171117F	Analysis Date:	11/17/2017 5:00:00 PM	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	37200	41.0	273.2	38360	-418	80	120	1.45	25	S
Antimony	42.2	1.09	54.63	0	77.2	80	120	0.371	25	S
Arsenic	70.3	1.09	54.63	15.90	99.5	80	120	1.07	25	
Barium	215	2.19	54.63	147.0	125	80	120	11.5	25	S
Beryllium	47.2	0.328	54.63	1.123	84.4	80	120	0.407	25	
Cadmium	52.5	0.328	54.63	0.3935	95.4	80	120	0.235	25	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117F

Sample ID	1711110-02A MSD	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg-dry			
SampType:	MSD	Run ID:	ICP-MS4_171117F	Analysis Date:	11/17/2017 5:00:00 PM	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	17800	41.0	1366	14660	233	80	120	16.9	25	S
Chromium	94.2	2.19	54.63	45.22	89.7	80	120	0.305	25	
Cobalt	62.3	2.19	54.63	10.62	94.6	80	120	1.38	25	
Copper	72.3	2.19	54.63	28.27	80.6	80	120	3.09	25	
Iron	23200	41.0	273.2	23320	-52.3	80	120	2.84	25	S
Lead	180	0.328	54.63	91.77	162	80	120	25.9	25	SR
Magnesium	6080	41.0	1366	5176	66.1	80	120	2.58	25	S
Manganese	758	2.19	54.63	673.9	154	80	120	25.8	25	SR
Molybdenum	50.4	2.19	54.63	0.9417	90.6	80	120	0.463	25	
Nickel	78.4	2.19	54.63	25.85	96.3	80	120	1.07	25	
Potassium	6530	41.0	1366	5162	100	80	120	0.737	25	
Selenium	55.9	0.546	54.63	3.410	96.1	80	120	2.25	25	
Silver	50.7	0.219	54.63	0.1334	92.5	80	120	0.094	25	
Sodium	1310	41.0	1366	73.60	90.5	80	120	0.047	25	
Thallium	54.9	1.09	54.63	0.6346	99.3	80	120	0.098	25	
Vanadium	125	2.73	54.63	73.78	93.5	80	120	0.679	25	
Zinc	156	2.73	54.63	87.96	125	80	120	10.6	25	S

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117F

Sample ID	ICV-171117B	Batch ID:	R95222	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_171117F	Analysis Date:	11/17/2017 12:51:00 P	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	2.49	0.0300	2.50	0	99.5	90	110			
Antimony	0.104	0.00250	0.100	0	104	90	110			
Arsenic	0.102	0.00500	0.100	0	102	90	110			
Barium	0.103	0.0100	0.100	0	103	90	110			
Beryllium	0.0999	0.00100	0.100	0	99.9	90	110			
Cadmium	0.104	0.00100	0.100	0	104	90	110			
Calcium	2.61	0.300	2.50	0	105	90	110			
Chromium	0.103	0.00500	0.100	0	103	90	110			
Cobalt	0.101	0.00500	0.100	0	101	90	110			
Copper	0.104	0.0100	0.100	0	104	90	110			
Iron	2.59	0.100	2.50	0	104	90	110			
Lead	0.0990	0.00100	0.100	0	99.0	90	110			
Magnesium	2.65	0.300	2.50	0	106	90	110			
Manganese	0.0996	0.0100	0.100	0	99.6	90	110			
Molybdenum	0.0991	0.00500	0.100	0	99.1	90	110			
Nickel	0.104	0.0100	0.100	0	104	90	110			
Potassium	2.52	0.300	2.50	0	101	90	110			
Selenium	0.103	0.00500	0.100	0	103	90	110			
Silver	0.105	0.00200	0.100	0	105	90	110			
Sodium	2.62	0.300	2.50	0	105	90	110			
Thallium	0.0958	0.00150	0.100	0	95.8	90	110			
Vanadium	0.0989	0.00100	0.100	0	98.9	90	110			
Zinc	0.104	0.00500	0.100	0	104	90	110			

Sample ID	LCVL-171117B	Batch ID:	R95222	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_171117F	Analysis Date:	11/17/2017 12:56:00 P	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.101	0.0300	0.100	0	101	70	130			
Antimony	0.00198	0.00250	0.00200	0	99.2	70	130			
Arsenic	0.00492	0.00500	0.00500	0	98.3	70	130			
Barium	0.00504	0.0100	0.00500	0	101	70	130			
Beryllium	0.000962	0.00100	0.00100	0	96.2	70	130			
Cadmium	0.00102	0.00100	0.00100	0	102	70	130			
Calcium	0.115	0.300	0.100	0	115	70	130			
Chromium	0.00502	0.00500	0.00500	0	100	70	130			
Cobalt	0.00497	0.00500	0.00500	0	99.3	70	130			
Copper	0.00541	0.0100	0.00500	0	108	70	130			
Iron	0.110	0.100	0.100	0	110	70	130			
Lead	0.000992	0.00100	0.00100	0	99.2	70	130			
Magnesium	0.0983	0.300	0.100	0	98.3	70	130			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117F

Sample ID	LCVL-171117B	Batch ID:	R95222	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_171117F	Analysis Date:	11/17/2017 12:56:00 P	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Manganese	0.00490	0.0100	0.00500	0	98.1	70	130			
Molybdenum	0.00502	0.00500	0.00500	0	100	70	130			
Nickel	0.00517	0.0100	0.00500	0	103	70	130			
Potassium	0.0980	0.300	0.100	0	98.0	70	130			
Selenium	0.00480	0.00500	0.00500	0	96.0	70	130			
Silver	0.00198	0.00200	0.00200	0	98.9	70	130			
Sodium	0.104	0.300	0.100	0	104	70	130			
Thallium	0.000942	0.00150	0.00100	0	94.2	70	130			
Vanadium	0.000985	0.00100	0.00100	0	98.5	70	130			
Zinc	0.00576	0.00500	0.00500	0	115	70	130			

Sample ID	CCV7-171117	Batch ID:	R95222	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_171117F	Analysis Date:	11/17/2017 4:21:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Aluminum	5.05	0.0300	5.00	0	101	90	110			
Antimony	0.205	0.00250	0.200	0	103	90	110			
Arsenic	0.199	0.00500	0.200	0	99.6	90	110			
Barium	0.202	0.0100	0.200	0	101	90	110			
Beryllium	0.195	0.00100	0.200	0	97.7	90	110			
Cadmium	0.199	0.00100	0.200	0	99.7	90	110			
Calcium	5.27	0.300	5.00	0	105	90	110			
Chromium	0.197	0.00500	0.200	0	98.6	90	110			
Cobalt	0.197	0.00500	0.200	0	98.3	90	110			
Copper	0.199	0.0100	0.200	0	99.4	90	110			
Iron	5.16	0.100	5.00	0	103	90	110			
Lead	0.192	0.00100	0.200	0	95.8	90	110			
Magnesium	4.99	0.300	5.00	0	99.8	90	110			
Manganese	0.196	0.0100	0.200	0	97.9	90	110			
Molybdenum	0.188	0.00500	0.200	0	93.9	90	110			
Nickel	0.202	0.0100	0.200	0	101	90	110			
Potassium	4.81	0.300	5.00	0	96.3	90	110			
Selenium	0.198	0.00500	0.200	0	98.8	90	110			
Silver	0.199	0.00200	0.200	0	99.7	90	110			
Sodium	5.07	0.300	5.00	0	101	90	110			
Thallium	0.201	0.00150	0.200	0	100	90	110			
Vanadium	0.192	0.00100	0.200	0	95.8	90	110			
Zinc	0.202	0.00500	0.200	0	101	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117F

Sample ID	LCVL7-171117	Batch ID:	R95222	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_171117F	Analysis Date: 11/17/2017 4:25:00 PM		Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0996	0.0300	0.100	0	99.6	70	130			
Antimony	0.00235	0.00250	0.00200	0	118	70	130			
Arsenic	0.00520	0.00500	0.00500	0	104	70	130			
Barium	0.00507	0.0100	0.00500	0	101	70	130			
Beryllium	0.000954	0.00100	0.00100	0	95.4	70	130			
Cadmium	0.00101	0.00100	0.00100	0	101	70	130			
Calcium	0.102	0.300	0.100	0	102	70	130			
Chromium	0.00500	0.00500	0.00500	0	100	70	130			
Cobalt	0.00497	0.00500	0.00500	0	99.4	70	130			
Copper	0.00539	0.0100	0.00500	0	108	70	130			
Iron	0.109	0.100	0.100	0	109	70	130			
Lead	0.000961	0.00100	0.00100	0	96.1	70	130			
Magnesium	0.0971	0.300	0.100	0	97.1	70	130			
Manganese	0.00497	0.0100	0.00500	0	99.4	70	130			
Molybdenum	0.00478	0.00500	0.00500	0	95.6	70	130			
Nickel	0.00516	0.0100	0.00500	0	103	70	130			
Potassium	0.0995	0.300	0.100	0	99.5	70	130			
Selenium	0.00514	0.00500	0.00500	0	103	70	130			
Silver	0.00196	0.00200	0.00200	0	97.8	70	130			
Sodium	0.164	0.300	0.100	0	164	70	130			S
Thallium	0.000958	0.00150	0.00100	0	95.8	70	130			
Vanadium	0.000985	0.00100	0.00100	0	98.5	70	130			
Zinc	0.00587	0.00500	0.00500	0	117	70	130			

Sample ID	CCV8-171117	Batch ID:	R95222	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_171117F	Analysis Date:	11/17/2017 5:02:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	5.06	0.0300	5.00	0	101	90	110			
Antimony	0.199	0.00250	0.200	0	99.5	90	110			
Arsenic	0.201	0.00500	0.200	0	100	90	110			
Barium	0.203	0.0100	0.200	0	101	90	110			
Beryllium	0.183	0.00100	0.200	0	91.7	90	110			
Cadmium	0.194	0.00100	0.200	0	96.8	90	110			
Calcium	5.29	0.300	5.00	0	106	90	110			
Chromium	0.195	0.00500	0.200	0	97.3	90	110			
Cobalt	0.190	0.00500	0.200	0	95.0	90	110			
Copper	0.197	0.0100	0.200	0	98.4	90	110			
Iron	5.07	0.100	5.00	0	101	90	110			
Lead	0.189	0.00100	0.200	0	94.6	90	110			
Magnesium	4.89	0.300	5.00	0	97.7	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117F

Sample ID	CCV8-171117	Batch ID:	R95222	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_171117F	Analysis Date:	11/17/2017 5:02:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.195	0.0100	0.200	0	97.5	90	110			
Molybdenum	0.182	0.00500	0.200	0	91.2	90	110			
Nickel	0.197	0.0100	0.200	0	98.5	90	110			
Potassium	4.86	0.300	5.00	0	97.1	90	110			
Selenium	0.198	0.00500	0.200	0	98.8	90	110			
Silver	0.192	0.00200	0.200	0	95.9	90	110			
Sodium	4.98	0.300	5.00	0	99.6	90	110			
Thallium	0.199	0.00150	0.200	0	99.4	90	110			
Vanadium	0.192	0.00100	0.200	0	95.9	90	110			
Zinc	0.199	0.00500	0.200	0	99.7	90	110			

Sample ID	LCVL8-171117	Batch ID:	R95222	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_171117F	Analysis Date: 11/17/2017 5:06:00 PM		Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.107	0.0300	0.100	0	107	70	130			
Antimony	0.00208	0.00250	0.00200	0	104	70	130			
Arsenic	0.00519	0.00500	0.00500	0	104	70	130			
Barium	0.00501	0.0100	0.00500	0	100	70	130			
Beryllium	0.000896	0.00100	0.00100	0	89.6	70	130			
Cadmium	0.00102	0.00100	0.00100	0	102	70	130			
Calcium	0.109	0.300	0.100	0	109	70	130			
Chromium	0.00497	0.00500	0.00500	0	99.5	70	130			
Cobalt	0.00501	0.00500	0.00500	0	100	70	130			
Copper	0.00535	0.0100	0.00500	0	107	70	130			
Iron	0.113	0.100	0.100	0	113	70	130			
Lead	0.00102	0.00100	0.00100	0	102	70	130			
Magnesium	0.0978	0.300	0.100	0	97.8	70	130			
Manganese	0.00512	0.0100	0.00500	0	102	70	130			
Molybdenum	0.00472	0.00500	0.00500	0	94.4	70	130			
Nickel	0.00526	0.0100	0.00500	0	105	70	130			
Potassium	0.0999	0.300	0.100	0	99.9	70	130			
Selenium	0.00485	0.00500	0.00500	0	97.1	70	130			
Silver	0.00194	0.00200	0.00200	0	97.2	70	130			
Sodium	0.131	0.300	0.100	0	131	70	130			
Thallium	0.000955	0.00150	0.00100	0	95.5	70	130			
Vanadium	0.00105	0.00100	0.00100	0	105	70	130			
Zinc	0.00576	0.00500	0.00500	0	115	70	130			

S

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL
DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117G

The QC data in batch 83247 applies to the following samples: 1711118-08A, 1711118-09A

Sample ID	MB-83247	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg				
SampType:	MBLK	Run ID:	ICP-MS4_171117G	Analysis Date:	11/17/2017 4:29:00 PM	Prep Date:	11/16/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Uranium	<1.00	2.50									N
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Sample ID	LCS-83247	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg				
SampType:	LCS	Run ID:	ICP-MS4_171117G	Analysis Date:	11/17/2017 4:31:00 PM	Prep Date:	11/16/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Uranium	48.1	2.50	50.00	0	96.1	80	120				N
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Sample ID	LCSD-83247	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg				
SampType:	LCSD	Run ID:	ICP-MS4_171117G	Analysis Date:	11/17/2017 4:33:00 PM	Prep Date:	11/16/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Uranium	47.8	2.50	50.00	0	95.5	80	120	0.602	20		N
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Sample ID	1711110-02A SD	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg-dry				
SampType:	SD	Run ID:	ICP-MS4_171117G	Analysis Date:	11/17/2017 4:39:00 PM	Prep Date:	11/16/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Uranium	<5.41	13.5	0	0					0	10	N
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Sample ID	1711110-02A PDS	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg-dry				
SampType:	PDS	Run ID:	ICP-MS4_171117G	Analysis Date:	11/17/2017 4:57:00 PM	Prep Date:	11/16/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Uranium	57.3	2.71	54.12	0	106	80	120				N
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Sample ID	1711110-02A MS	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg-dry				
SampType:	MS	Run ID:	ICP-MS4_171117G	Analysis Date:	11/17/2017 4:58:00 PM	Prep Date:	11/16/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Uranium	53.3	2.73	54.63	0	97.5	80	120				N
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Sample ID	1711110-02A MSD	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg-dry				
SampType:	MSD	Run ID:	ICP-MS4_171117G	Analysis Date:	11/17/2017 5:00:00 PM	Prep Date:	11/16/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Uranium	53.4	2.73	54.63	0	97.8	80	120	0.276	20		N
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Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171117G

Sample ID	ICV-171117B	Batch ID:	R95224	TestNo:	SW6020A	Units:	mg/L				
SampType:	ICV	Run ID:	ICP-MS4_171117G	Analysis Date:	11/17/2017 12:51:00 P	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		0.0970	0.0100	0.100	0	97.0	90	110			N

Sample ID	LCVL-171117B	Batch ID:	R95224	TestNo:	SW6020A	Units:	mg/L				
SampType:	LCVL	Run ID:	ICP-MS4_171117G	Analysis Date:	11/17/2017 12:56:00 P	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		0.00448	0.0100	0.00500	0	89.5	70	130			N

Sample ID	CCV7-171117	Batch ID:	R95224	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_171117G	Analysis Date:	11/17/2017 4:21:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		0.191	0.0100	0.200	0	95.4	90	110			N

Sample ID	LCVL7-171117	Batch ID:	R95224	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_171117G	Analysis Date:	11/17/2017 4:25:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00442	0.0100	0.00500	0	88.5	70	130			N

Sample ID	CCV8-171117	Batch ID:	R95224	TestNo:	SW6020A	Units:	mg/L				
SampType:	CCV	Run ID:	ICP-MS4_171117G	Analysis Date:	11/17/2017 5:02:00 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium		0.187	0.0100	0.200	0	93.3	90	110			N

Sample ID	LCVL8-171117	Batch ID:	R95224	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_171117G	Analysis Date:	11/17/2017 5:06:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Uranium	0.00443	0.0100	0.00500	0	88.6	70	130			N

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171120B

The QC data in batch 83247 applies to the following samples: 1711118-08A, 1711118-09A

Sample ID	1711110-02A SD	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg-dry			
SampType:	SD	Run ID:	ICP-MS4_171120B	Analysis Date:	11/20/2017 11:19:00 A	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Aluminum	36600	4060	0	36580				0.077	10	
Calcium	16200	4060	0	16360				0.963	10	
Iron	25300	4060	0	24450				3.27	10	
Manganese	692	216	0	691.4				0.021	10	

Sample ID	1711110-02A PDS	Batch ID:	83247	TestNo:	SW6020A	Units:	mg/Kg-dry			
SampType:	PDS	Run ID:	ICP-MS4_171120B	Analysis Date:	11/20/2017 11:25:00 A	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Aluminum	60200	812	27060	36580	87.3	80	120			
Calcium	43700	812	27060	16360	101	80	120			
Iron	48900	812	27060	24450	90.2	80	120			
Manganese	1710	43.3	1082	691.4	93.7	80	120			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS4_171120B

Sample ID	ICV-171120	Batch ID:	R95245	TestNo:	SW6020A	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS4_171120B	Analysis Date:	11/20/2017 10:50:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	2.29	0.0300	2.50	0	91.8	90	110			
Calcium	2.61	0.300	2.50	0	105	90	110			
Iron	2.44	0.100	2.50	0	97.6	90	110			
Sodium	2.55	0.300	2.50	0	102	90	110			

Sample ID	LCVL-171120	Batch ID:	R95245	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_171120B	Analysis Date:	11/20/2017 11:00:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0971	0.0300	0.100	0	97.1	70	130			
Calcium	0.108	0.300	0.100	0	108	70	130			
Iron	0.107	0.100	0.100	0	107	70	130			
Sodium	0.0982	0.300	0.100	0	98.2	70	130			

Sample ID	CCV1-171120	Batch ID:	R95245	TestNo:	SW6020A	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS4_171120B	Analysis Date:	11/20/2017 11:27:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	4.90	0.0300	5.00	0	98.0	90	110			
Calcium	5.45	0.300	5.00	0	109	90	110			
Iron	5.03	0.100	5.00	0	101	90	110			
Sodium	5.15	0.300	5.00	0	103	90	110			

Sample ID	LCVL1-171120	Batch ID:	R95245	TestNo:	SW6020A	Units:	mg/L			
SampType:	LCVL	Run ID:	ICP-MS4_171120B	Analysis Date:	11/20/2017 11:40:00 A	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.0963	0.0300	0.100	0	96.3	70	130			
Calcium	0.109	0.300	0.100	0	109	70	130			
Iron	0.105	0.100	0.100	0	105	70	130			
Sodium	0.0943	0.300	0.100	0	94.3	70	130			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_170908B

Sample ID	DCS-82297	Batch ID:	82297	TestNo:	SW9056A	Units:	mg/Kg			
SampType:	DCS	Run ID:	IC2_170908B	Analysis Date:	9/8/2017 4:30:57 PM	Prep Date:	9/8/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide		5.52	5.00	5.000	0	110	80	120	0	0
Chloride		2.89	5.00	2.500	0	116	80	120	0	0
Sulfate		8.32	10.0	7.500	0	111	80	120	0	0

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_171116A

The QC data in batch 83252 applies to the following samples: 1711118-08A, 1711118-09A

Sample ID	MB-83252		Batch ID:	83252		TestNo:	SW9056A		Units:	mg/Kg	
SampType:	MBLK		Run ID:	IC2_171116A		Analysis Date:	11/16/2017 2:52:54 PM		Prep Date:	11/16/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Bromide	<2.00	5.00								
Chloride	<2.00	5.00								
Sulfate	<3.00	10.0								

Sample ID	LCS-83252		Batch ID:	83252		TestNo:	SW9056A		Units:	mg/Kg	
SampType:	LCS		Run ID:	IC2_171116A		Analysis Date:	11/16/2017 3:06:55 PM		Prep Date:	11/16/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Bromide	99.1	5.00	100.0	0	99.1	80	120			
Chloride	50.1	5.00	50.00	0	100	80	120			
Sulfate	149	10.0	150.0	0	99.1	80	120			

Sample ID	LCSD-83252		Batch ID:	83252		TestNo:	SW9056A		Units:	mg/Kg	
SampType:	LCSD		Run ID:	IC2_171116A		Analysis Date:	11/16/2017 3:20:54 PM		Prep Date:	11/16/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Bromide	102	5.00	100.0	0	102	80	120	2.52	15	
Chloride	51.3	5.00	50.00	0	103	80	120	2.20	15	
Sulfate	153	10.0	150.0	0	102	80	120	2.98	15	

Sample ID	1711118-08A-DUP		Batch ID:	83252		TestNo:	SW9056A		Units:	mg/Kg-dry	
SampType:	DUP		Run ID:	IC2_171116A		Analysis Date:	11/16/2017 3:48:54 PM		Prep Date:	11/16/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Bromide	64.4	63.1	0	77.87				18.9	10	R
Chloride	8360	63.1	0	8311				0.564	10	
Sulfate	4090	126	0	5015				20.4	10	R

Sample ID	1711118-08AMS			Batch ID:	83252		TestNo:	SW9056A		Units:	mg/Kg-dry	
SampType:	MS			Run ID:	IC2_171116A		Analysis Date:	11/16/2017 4:02:54 PM		Prep Date:	11/16/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Bromide	166	62.4	124.8	77.87	70.8	80	120			S
Chloride	8120	62.4	124.8	8311	-151	80	120			S
Sulfate	4910	125	124.8	5015	-81.7	80	120			S

Sample ID	1711118-08AMSD			Batch ID:	83252		TestNo:	SW9056A		Units:	mg/Kg-dry	
SampType:	MSD			Run ID:	IC2_171116A		Analysis Date:	11/16/2017 4:16:54 PM		Prep Date:	11/16/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_171116A

Sample ID	1711118-08AMSD	Batch ID:	83252	TestNo:	SW9056A	Units:	mg/Kg-dry			
SampType:	MSD	Run ID:	IC2_171116A	Analysis Date:	11/16/2017 4:16:54 PM	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	288	61.1	122.2	77.87	172	80	120	53.7	15	SR
Chloride	<24.4	61.1	122.2	8311	-6800	80	120	0	15	S
Sulfate	3550	122	122.2	5015	-1200	80	120	32.3	15	SR

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_171116A

Sample ID	ICV-171116	Batch ID:	R95201	TestNo:	SW9056A	Units:	mg/Kg			
SampType:	ICV	Run ID:	IC2_171116A	Analysis Date:	11/16/2017 9:54:05 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	49.4	5.00	50.00	0	98.9	90	110			
Chloride	24.7	5.00	25.00	0	98.6	90	110			
Sulfate	74.3	10.0	75.00	0	99.1	90	110			

Sample ID	CCV1-171116	Batch ID:	R95201	TestNo:	SW9056A	Units:	mg/Kg			
SampType:	CCV	Run ID:	IC2_171116A	Analysis Date:	11/16/2017 5:54:54 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.0	5.00	20.00	0	95.0	90	110			
Chloride	9.60	5.00	10.00	0	96.0	90	110			
Sulfate	28.6	10.0	30.00	0	95.2	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_171117A

The QC data in batch 83252 applies to the following samples: 1711118-08A, 1711118-09A

Sample ID	1711118-08A-DUP	Batch ID:	83252	TestNo:	SW9056A	Units:	mg/Kg-dry			
SampType:	DUP	Run ID:	IC2_171117A	Analysis Date:	11/17/2017 11:41:18 A	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	<253	631	0	0				0	10	
Chloride	17700	631	0	19330				8.96	10	

Sample ID	1711118-08AMS	Batch ID:	83252	TestNo:	SW9056A	Units:	mg/Kg-dry			
SampType:	MS	Run ID:	IC2_171117A	Analysis Date:	11/17/2017 11:55:18 A	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	304	624	124.8	0	244	80	120			S
Chloride	16700	624	124.8	19330	-2080	80	120			S

Sample ID	1711118-08AMSD	Batch ID:	83252	TestNo:	SW9056A	Units:	mg/Kg-dry			
SampType:	MSD	Run ID:	IC2_171117A	Analysis Date:	11/17/2017 12:09:18 P	Prep Date:	11/16/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	355	611	122.2	0	291	80	120	15.3	15	SR
Chloride	18700	611	122.2	19330	-479	80	120	11.3	15	S

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC2_171117A

Sample ID	ICV-171117	Batch ID:	R95209	TestNo:	SW9056A	Units:	mg/Kg			
SampType:	ICV	Run ID:	IC2_171117A	Analysis Date:	11/17/2017 9:48:20 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	50.0	5.00	50.00	0	100	90	110			
Chloride	25.0	5.00	25.00	0	100	90	110			

Sample ID	CCV1-171117	Batch ID:	R95209	TestNo:	SW9056A	Units:	mg/Kg			
SampType:	CCV	Run ID:	IC2_171117A	Analysis Date:	11/17/2017 1:33:17 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.9	5.00	20.00	0	99.5	90	110			
Chloride	9.92	5.00	10.00	0	99.2	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_171109A

Sample ID	DCS1-83171	Batch ID:	83171	TestNo:	E300	Units:	mg/L			
SampType:	DCS	Run ID:	IC4_171109A	Analysis Date:	11/9/2017 3:32:06 PM	Prep Date:	11/9/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	1.03	1.00	1.000	0	103	80	120	0	0	
Chloride	0.543	1.00	0.5000	0	109	80	120	0	0	
Sulfate	1.58	3.00	1.500	0	105	80	120	0	0	

Sample ID	DCS2-83171	Batch ID:	83171	TestNo:	E300	Units:	mg/L			
SampType:	DCS2	Run ID:	IC4_171109A	Analysis Date:	11/9/2017 3:44:06 PM	Prep Date:	11/9/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	1.99	1.00	2.000	0	99.5	80	120	0	0	
Chloride	0.986	1.00	1.000	0	98.6	80	120	0	0	
Sulfate	2.94	3.00	3.000	0	98.0	80	120	0	0	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_171114A

The QC data in batch 83219 applies to the following samples: 1711118-01C, 1711118-02C, 1711118-03C, 1711118-04C, 1711118-05C, 1711118-06C

Sample ID	MB-83219	Batch ID:	83219	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC4_171114A	Analysis Date:	11/14/2017 10:11:42 A	Prep Date:	11/14/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Bromide	<0.300	1.00								
Chloride	<0.300	1.00								
Sulfate	<1.00	3.00								

Sample ID	LCS-83219	Batch ID:	83219	TestNo:	E300	Units:	mg/L			
SampType:	LCS	Run ID:	IC4_171114A	Analysis Date:	11/14/2017 10:23:42 A	Prep Date:	11/14/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Bromide	19.6	1.00	20.00	0	98.0	90	110			
Chloride	9.80	1.00	10.00	0	98.0	90	110			
Sulfate	29.0	3.00	30.00	0	96.8	90	110			

Sample ID	LCSD-83219	Batch ID:	83219	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC4_171114A	Analysis Date:	11/14/2017 10:35:42 A	Prep Date:	11/14/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Bromide	19.7	1.00	20.00	0	98.6	90	110	0.569	20	
Chloride	9.93	1.00	10.00	0	99.3	90	110	1.32	20	
Sulfate	29.0	3.00	30.00	0	96.6	90	110	0.182	20	

Sample ID	1711117-05BMS	Batch ID:	83219	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC4_171114A	Analysis Date:	11/14/2017 12:51:55 P	Prep Date:	11/14/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Bromide	2080	100	2000	0	104	90	110			
Chloride	2940	100	2000	784.2	108	90	110			
Sulfate	2530	300	2000	440.2	105	90	110			

Sample ID	1711117-05BMSD	Batch ID:	83219	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC4_171114A	Analysis Date:	11/14/2017 1:03:55 PM	Prep Date:	11/14/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Bromide	2080	100	2000	0	104	90	110	0.049	20	
Chloride	2930	100	2000	784.2	107	90	110	0.503	20	
Sulfate	2530	300	2000	440.2	104	90	110	0.173	20	

Sample ID	1711119-02CMS	Batch ID:	83219	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC4_171114A	Analysis Date:	11/14/2017 6:13:37 PM	Prep Date:	11/14/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_171114A

Sample ID	1711119-02CMS	Batch ID:	83219	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC4_171114A	Analysis Date:	11/14/2017 6:13:37 PM	Prep Date:	11/14/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2070	100	2000	0	104	90	110			
Chloride	3150	100	2000	1020	106	90	110			
Sulfate	3160	300	2000	1064	105	90	110			

Sample ID	1711119-02CMSD	Batch ID:	83219	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC4_171114A	Analysis Date:	11/14/2017 6:25:37 PM	Prep Date:	11/14/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	2100	100	2000	0	105	90	110	1.27	20	
Chloride	3170	100	2000	1020	107	90	110	0.703	20	
Sulfate	3190	300	2000	1064	106	90	110	0.823	20	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_171114A

Sample ID	ICV-171114	Batch ID:	R95151	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC4_171114A	Analysis Date:	11/14/2017 9:47:41 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	50.2	1.00	50.00	0	100	90	110			
Chloride	25.1	1.00	25.00	0	100	90	110			
Sulfate	74.7	3.00	75.00	0	99.6	90	110			

Sample ID	CCV1-171114	Batch ID:	R95151	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_171114A	Analysis Date:	11/14/2017 2:49:37 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.8	1.00	20.00	0	99.0	90	110			
Chloride	9.86	1.00	10.00	0	98.6	90	110			
Sulfate	29.2	3.00	30.00	0	97.4	90	110			

Sample ID	CCV2-171114	Batch ID:	R95151	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_171114A	Analysis Date:	11/14/2017 5:25:37 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.9	1.00	20.00	0	99.5	90	110			
Chloride	10.0	1.00	10.00	0	100	90	110			
Sulfate	29.5	3.00	30.00	0	98.4	90	110			

Sample ID	CCV3-171114	Batch ID:	R95151	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_171114A	Analysis Date:	11/14/2017 8:25:37 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.9	1.00	20.00	0	99.7	90	110			
Chloride	10.1	1.00	10.00	0	101	90	110			
Sulfate	29.6	3.00	30.00	0	98.5	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_171115A

The QC data in batch 83234 applies to the following samples: 1711118-01C, 1711118-02C, 1711118-03C, 1711118-04C, 1711118-05C, 1711118-06C

Sample ID	MB-83234	Batch ID:	83234	TestNo:	E300	Units:	mg/L			
SampType:	MBLK	Run ID:	IC4_171115A	Analysis Date:	11/15/2017 10:23:51 A	Prep Date:	11/15/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide		<0.300	1.00							
Chloride		<0.300	1.00							

Sample ID	LCS-83234	Batch ID:	83234	TestNo:	E300	Units:	mg/L			
SampType:	LCS	Run ID:	IC4_171115A	Analysis Date:	11/15/2017 10:35:51 A	Prep Date:	11/15/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide		19.7	1.00	20.00	0	98.3	90	110		
Chloride		9.97	1.00	10.00	0	99.7	90	110		

Sample ID	LCSD-83234	Batch ID:	83234	TestNo:	E300	Units:	mg/L			
SampType:	LCSD	Run ID:	IC4_171115A	Analysis Date:	11/15/2017 10:47:51 A	Prep Date:	11/15/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide		19.6	1.00	20.00	0	98.0	90	110	0.342	20
Chloride		9.88	1.00	10.00	0	98.8	90	110	0.874	20

Sample ID	1711118-06CMS	Batch ID:	83234	TestNo:	E300	Units:	mg/L			
SampType:	MS	Run ID:	IC4_171115A	Analysis Date:	11/15/2017 2:12:10 PM	Prep Date:	11/15/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide		20700	1000	20000	0	104	90	110		
Chloride		27600	1000	20000	6066	108	90	110		

Sample ID	1711118-06CMSD	Batch ID:	83234	TestNo:	E300	Units:	mg/L			
SampType:	MSD	Run ID:	IC4_171115A	Analysis Date:	11/15/2017 2:24:10 PM	Prep Date:	11/15/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Bromide		20700	1000	20000	0	104	90	110	0.113	20
Chloride		27700	1000	20000	6066	108	90	110	0.262	20

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_171115A

Sample ID	ICV-171115	Batch ID:	R95175	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC4_171115A	Analysis Date:	11/15/2017 9:59:51 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	50.7	1.00	50.00	0	101	90	110			
Chloride	25.3	1.00	25.00	0	101	90	110			

Sample ID	CCV1-171115	Batch ID:	R95175	TestNo:	E300	Units:	mg/L				
SampType:	CCV	Run ID:	IC4_171115A	Analysis Date: 11/15/2017 4:07:33 PM			Prep Date:				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide		20.3	1.00	20.00	0	102	90	110			
Chloride		10.2	1.00	10.00	0	102	90	110			

Sample ID	CCV2-171115	Batch ID:	R95175	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_171115A	Analysis Date:	11/15/2017 6:55:33 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.5	1.00	20.00	0	102	90	110			

Sample ID	CCV3-171115	Batch ID:	R95175	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_171115A	Analysis Date:	11/15/2017 9:19:33 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.8	1.00	20.00	0	99.1	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_171116A

The QC data in batch 83250 applies to the following samples: 1711118-01C

Sample ID	MB-83250	Batch ID:	83250	TestNo:	E300	Units:	mg/L				
SampType:	MBLK	Run ID:	IC4_171116A	Analysis Date:	11/16/2017 10:14:19 A	Prep Date:	11/16/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Bromide	<0.300	1.00									
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Sample ID	LCS-83250	Batch ID:	83250	TestNo:	E300	Units:	mg/L				
SampType:	LCS	Run ID:	IC4_171116A	Analysis Date:	11/16/2017 10:26:19 A	Prep Date:	11/16/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Bromide	19.8	1.00	20.00	0	98.8	90	110				
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Sample ID	LCSD-83250	Batch ID:	83250	TestNo:	E300	Units:	mg/L				
SampType:	LCSD	Run ID:	IC4_171116A	Analysis Date:	11/16/2017 10:38:19 A	Prep Date:	11/16/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Bromide	19.8	1.00	20.00	0	99.1	90	110	0.323	20		
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Sample ID	1711126-03BMS	Batch ID:	83250	TestNo:	E300	Units:	mg/L				
SampType:	MS	Run ID:	IC4_171116A	Analysis Date:	11/16/2017 12:42:32 P	Prep Date:	11/16/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Bromide	20900	1000	20000	0	105	90	110				
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Sample ID	1711126-03BMSD	Batch ID:	83250	TestNo:	E300	Units:	mg/L				
SampType:	MSD	Run ID:	IC4_171116A	Analysis Date:	11/16/2017 12:54:32 P	Prep Date:	11/16/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Bromide	21100	1000	20000	0	106	90	110	1.01	20		
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Qualifiers:

B	Analyte detected in the associated Method Blank
J	Analyte detected between MDL and RL
ND	Not Detected at the Method Detection Limit
RL	Reporting Limit
J	Analyte detected between SDL and RL

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: IC4_171116A

Sample ID	ICV-171116	Batch ID:	R95199	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC4_171116A	Analysis Date:	11/16/2017 9:50:19 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	50.9	1.00	50.00	0	102	90	110			

Sample ID	CCV1-171116	Batch ID:	R95199	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_171116A	Analysis Date:	11/16/2017 3:30:32 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	19.8	1.00	20.00	0	99.0	90	110			

Sample ID	CCV2-171116	Batch ID:	R95199	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC4_171116A	Analysis Date:	11/16/2017 6:18:32 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Bromide	20.0	1.00	20.00	0	100	90	110			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: PMOIST_171117A

The QC data in batch 83276 applies to the following samples: 1711118-08A, 1711118-09B

Sample ID	1711148-01B-DUP	Batch ID:	83276	TestNo:	D2216	Units:	WT%				
SampType:	DUP	Run ID:	PMOIST_171117A	Analysis Date:	11/20/2017 9:00:00 AM	Prep Date:	11/17/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Percent Moisture		13.6	0	0	12.68				7.26	30	

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_171115A

The QC data in batch 83243 applies to the following samples: 1711118-01C, 1711118-02C, 1711118-03C, 1711118-04C, 1711118-05C, 1711118-06C

Sample ID	1711118-01C-DUP	Batch ID:	83243	TestNo:	M4500-H+ B	Units:	pH Units@17.1°C
SampType:	DUP	Run ID:	TITRATOR_171115A	Analysis Date:	11/15/2017 11:31:00 A	Prep Date:	11/15/2017

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	8.39	0	0	8.370				0.239	5	

Qualifiers:

B	Analyte detected in the associated Method Blank
J	Analyte detected between MDL and RL
ND	Not Detected at the Method Detection Limit
RL	Reporting Limit
J	Analyte detected between SDL and RL

DF	Dilution Factor
MDL	Method Detection Limit
R	RPD outside accepted control limits
S	Spike Recovery outside control limits
N	Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_171115A

Sample ID	ICV-171115			Batch ID:	R95172		TestNo:	M4500-H+ B		Units:	pH Units@21.8°C		
SampType:	ICV			Run ID:	TITRATOR_171115A		Analysis Date:	11/15/2017 11:05:00 A		Prep Date:	11/15/2017		
Analyte				Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH				10.0	0	10.00	0	100	99	101			

Sample ID	CCV1-171115			Batch ID:	R95172		TestNo:	M4500-H+ B		Units:	pH Units@22.1°C	
SampType:	CCV			Run ID:	TITRATOR_171115A		Analysis Date:	11/15/2017 11:39:00 A		Prep Date:	11/15/2017	
Analyte	Result		RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
pH	6.97		0	7.000	0	99.6	97.1	102.9				

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: UV/VIS_2_171110B

Sample ID	DCS-83185	Batch ID:	83185	TestNo:	SW9014	Units:	mg/Kg			
SampType:	DCS	Run ID:	UV/VIS_2_171110B	Analysis Date:	11/10/2017 2:40:00 PM	Prep Date:	11/10/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Cyanide, Total		0.419	0.500	0.5000	0	83.7	10	300	0	0

Sample ID	DCS2-83185	Batch ID:	83185	TestNo:	SW9014	Units:	mg/Kg			
SampType:	DCS	Run ID:	UV/VIS_2_171110B	Analysis Date:	11/10/2017 2:40:00 PM	Prep Date:	11/10/2017			
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual
Cyanide, Amenable to Chlorination		0.199	0.500	0.2500	0	79.6	10	300	0	0

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: UV/VIS_2_171110D

Sample ID	DCS-83186	Batch ID:	83186	TestNo:	M4500-CN E	Units:	mg/L			
SampType:	DCS	Run ID:	UV/VIS_2_171110D	Analysis Date:	11/10/2017 2:40:00 PM	Prep Date:	11/10/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide, Total	0.0152	0.0200	0.02000	0	76.0	50	150	0	0	

Sample ID	DCS2-83186		Batch ID:	83186		TestNo:	M4500-CN E		Units:	mg/L	
SampType:	DCS		Run ID:	UV/VIS_2_171110D		Analysis Date:	11/10/2017 2:42:00 PM		Prep Date:	11/10/2017	
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Cyanide, Amenable to Chlorination	0.00808	0.0200	0.01000	0	80.8	10	200	0	0		

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: UV/VIS_2_171117A

The QC data in batch 83271 applies to the following samples: 1711118-01B, 1711118-02B, 1711118-03B, 1711118-04B, 1711118-05B, 1711118-06B, 1711118-07B

Sample ID	MB-83271	Batch ID:	83271	TestNo:	M4500-CN E	Units:	mg/L			
SampType:	MBLK	Run ID:	UV/VIS_2_171117A	Analysis Date:	11/17/2017 1:55:00 PM	Prep Date:	11/17/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cyanide, Total <0.0100 0.0200

Sample ID	LCS-83271			Batch ID:	83271		TestNo:	M4500-CN E		Units:	mg/L	
SampType:	LCS			Run ID:	UV/VIS_2_171117A		Analysis Date:	11/17/2017 1:55:00 PM		Prep Date:	11/17/2017	
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	

Cyanide, Total 0.172 0.0200 0.2000 0 85.9 85 115

Sample ID	1711118-01BMS		Batch ID:	83271		TestNo:	M4500-CN E		Units:	mg/L	
SampType:	MS		Run ID:	UV/VIS_2_171117A		Analysis Date:	11/17/2017 1:55:00 PM		Prep Date:	11/17/2017	
Analyte			Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit Qual

Cyanide, Total 0.178 0.0200 0.2000 0 89.1 79 114

Sample ID	1711118-01BMSD			Batch ID:	83271		TestNo:	M4500-CN E		Units:	mg/L	
SampType:	MSD			Run ID:	UV/VIS_2_171117A		Analysis Date:	11/17/2017 1:57:00 PM		Prep Date:	11/17/2017	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cyanide, Total 0.179 0.0200 0.2000 0 89.3 79 114 0.202 20

Sample ID	MB-83271AMEN	Batch ID:	83271	TestNo:	M4500-CN E	Units:	mg/L			
SampType:	MBLK	Run ID:	UV/VIS_2_171117A	Analysis Date:	11/17/2017 1:58:00 PM	Prep Date:	11/17/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cyanide, Amenable to Chlorination <0.0100 0.0200 0

Sample ID	LCS-83271AMEN			Batch ID:	83271		TestNo:	M4500-CN E		Units:	mg/L	
SampType:	LCS			Run ID:	UV/VIS_2_171117A		Analysis Date:	11/17/2017 1:58:00 PM		Prep Date:	11/17/2017	
Analyte	Result			RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Cyanide, Amenable to Chlorination 0.0827 0.0200 0.1000 0 82.7 80 120

Qualifiers: B Analyte detected in the associated Method Blank
J Analyte detected between MDL and RL
ND Not Detected at the Method Detection Limit
RL Reporting Limit
J Analyte detected between SDL and RL

DF Dilution Factor
MDL Method Detection Limit
R RPD outside accepted control limits
S Spike Recovery outside control limits
N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: UV/VIS_2_171117A

Sample ID	ICV-171117	Batch ID:	R95211	TestNo:	M4500-CN E	Units:	mg/L			
SampType:	ICV	Run ID:	UV/VIS_2_171117A	Analysis Date:	11/17/2017 1:54:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide, Total	0.100	0.0200	0.1000	0	100	85	115			

Sample ID	CCV-171117	Batch ID:	R95211	TestNo:	M4500-CN E	Units:	mg/L			
SampType:	CCV	Run ID:	UV/VIS_2_171117A	Analysis Date:	11/17/2017 1:59:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide, Total	0.210	0.0200	0.2000	0	105	85	115			

Sample ID	CCV2-171117	Batch ID:	R95211	TestNo:	M4500-CN E	Units:	mg/L			
SampType:	CCV	Run ID:	UV/VIS_2_171117A	Analysis Date:	11/17/2017 5:18:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide, Amenable to Chlorination	<0.0100	0.0200	0							
Cyanide, Total	0.187	0.0200	0.2000	0	93.5	85	115			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: UV/VIS_2_171120D

The QC data in batch 83314 applies to the following samples: 1711118-08A, 1711118-09B

Sample ID	MB-83314	Batch ID:	83314	TestNo:	SW9014	Units:	mg/Kg				
SampType:	MBLK	Run ID:	UV/VIS_2_171120D	Analysis Date:	11/20/2017 4:56:00 PM	Prep Date:	11/20/2017				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide, Amenable to Chlorination		<0.200	0.500								
Cyanide, Total		<0.200	0.500								

Sample ID	LCS-83314	Batch ID:	83314	TestNo:	SW9014	Units:	mg/Kg			
SampType:	LCS	Run ID:	UV/VIS_2_171120D	Analysis Date:	11/20/2017 4:56:00 PM	Prep Date:	11/20/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide, Total	4.33	0.500	5.000	0	86.5	85	115			

Sample ID	1711118-08AMS	Batch ID:	83314	TestNo:	SW9014	Units:	mg/Kg-dry			
SampType:	MS	Run ID:	UV/VIS_2_171120D	Analysis Date:	11/20/2017 4:56:00 PM	Prep Date:	11/20/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide, Total	4.25	0.518	5.182	0	82.0	75	125			

Sample ID	1711118-08AMSD	Batch ID:	83314	TestNo:	SW9014	Units:	mg/Kg-dry			
SampType:	MSD	Run ID:	UV/VIS_2_171120D	Analysis Date:	11/20/2017 4:57:00 PM	Prep Date:	11/20/2017			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide, Total	4.97	0.587	5.865	0	84.8	75	125	15.7	30	

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

ANALYTICAL QC SUMMARY REPORT

RunID: UV/VIS_2_171120D

Sample ID	ICV-171120	Batch ID:	R95252	TestNo:	SW9014	Units:	mg/Kg			
SampType:	ICV	Run ID:	UV/VIS_2_171120D	Analysis Date:	11/20/2017 4:55:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide, Total	0.0863	0.500	0.1000	0	86.3	85	115			

Sample ID	CCV-171120	Batch ID:	R95252	TestNo:	SW9014	Units:	mg/Kg			
SampType:	CCV	Run ID:	UV/VIS_2_171120D	Analysis Date:	11/20/2017 5:01:00 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Cyanide, Total	0.174	0.500	0.2000	0	87.2	85	115			

Qualifiers:

- B Analyte detected in the associated Method Blank
- J Analyte detected between MDL and RL
- ND Not Detected at the Method Detection Limit
- RL Reporting Limit
- J Analyte detected between SDL and RL

- DF Dilution Factor
- MDL Method Detection Limit
- R RPD outside accepted control limits
- S Spike Recovery outside control limits
- N Parameter not NELAC certified

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

MQL SUMMARY REPORT

TestNo: E300	MDL	ML
Analyte	mg/L	mg/L
Bromide	0.300	1.00
Chloride	0.300	1.00
Sulfate	1.00	3.00

TestNo: SW6020A	MDL	ML
Analyte	mg/Kg	mg/Kg
Aluminum	12.5	37.5
Antimony	0.500	1.00
Arsenic	0.500	1.00
Barium	0.500	2.00
Beryllium	0.100	0.300
Cadmium	0.100	0.300
Calcium	12.5	37.5
Chromium	0.500	2.00
Cobalt	0.500	2.00
Copper	0.500	2.00
Iron	12.5	37.5
Lead	0.100	0.300
Magnesium	12.5	37.5
Manganese	0.500	2.00
Molybdenum	0.500	2.00
Nickel	0.500	2.00
Potassium	12.5	37.5
Selenium	0.150	0.500
Silver	0.100	0.200
Sodium	12.5	37.5
Thallium	0.500	1.00
Vanadium	1.00	2.50
Zinc	1.00	2.50

TestNo: SW6020A	MDL	ML
Analyte	mg/L	mg/L
Aluminum	0.0100	0.0300
Antimony	0.000800	0.00250
Arsenic	0.00200	0.00500
Barium	0.00300	0.0100
Beryllium	0.000300	0.00100
Cadmium	0.000300	0.00100
Calcium	0.100	0.300
Chromium	0.00200	0.00500
Cobalt	0.00300	0.00500
Copper	0.00200	0.0100
Iron	0.0300	0.100
Lead	0.000300	0.00100
Magnesium	0.100	0.300
Manganese	0.00300	0.0100
Molybdenum	0.00200	0.00500
Nickel	0.00300	0.0100
Potassium	0.100	0.300
Selenium	0.00200	0.00500
Silver	0.00100	0.00200
Sodium	0.100	0.300
Thallium	0.000500	0.00150
Vanadium	0.000500	0.00100
Zinc	0.00200	0.00500

TestNo: SW9056A	MDL	ML
Analyte	mg/Kg	mg/Kg
Bromide	2.00	5.00
Chloride	2.00	5.00
Sulfate	3.00	10.0

TestNo: SW9014	MDL	ML
Analyte	mg/Kg	mg/Kg
Cyanide, Amenable to Chlorination	0.200	0.500
Cyanide, Total	0.200	0.500

TestNo: M4500-CN E	MDL	ML
Analyte	mg/L	mg/L
Cyanide, Amenable to Chlorination	0.0100	0.0200
Cyanide, Total	0.0100	0.0200

TestNo: SW7471B	MDL	ML
Analyte	mg/Kg	mg/Kg
Mercury	0.0160	0.0400

Qualifiers: MQL -Method Quantitation Limit as defined by TRRP
MDL -Method Detection Limit as defined by TRRP

CLIENT: Geo Strata Environmental Consultants
Work Order: 1711118
Project: Peeler Ranch

SQL SUMMARY REPORT

TestNo: SW7470A	MDL	SQL
Analyte	mg/L	mg/L
Mercury	0.0000800	0.000200

TestNo: SW6020A	MDL	SQL
Analyte	mg/Kg	mg/Kg
Uranium, Total	1.00	2.50

TestNo: SW6020A	MDL	SQL
Analyte	mg/L	mg/L
Uranium, Total	0.00300	0.0100

Qualifiers: SQL -Method Quantitation Limit as defined by TRRP
MDL -Method Detection Limit as defined by TRRP